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ANNUAL PUBLIC HEALTH REPORT

OF THE

PROVINCE OF BIHAR AND ORISSA

FOR THE YEAR

1932

AND THE

ANNUAL VACCINATION REPORT

FOR THE YEAR

1932-33

BY

Major S. L. MITRA, D.P.H., I.M.S.,

Offg. Director of Public Health, Bihar and Orissa.



SUPERINTENDENT, GOVERNMENT PRINTING,
BIHAR AND ORISSA, PATNA,
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PROVINCE OF BIHAR & ORISSA

Scale 1" = 64 Miles




REFERENCES

- Boundary:— Division
 " District
 " Sub-division
 " State

REFERENCE TO NUMBERS

- | | |
|---------------|-------------|
| 1 KARAIKELA | 5 TIGIRIA |
| 2 NILGIRI | 6 ATHGARH |
| 3 NARSINGHPUR | 7 KHANDPARA |
| 4 BARAMBA | 8 RANPUR |



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Annual Public Health Report of the Province of Bihar and Orissa for the year 1932.

CHAPTER I.—Meteorology ; prices of grains, etc.

1. Rainfall.—

The following brief account of the meteorological conditions in the province during the year 1932 is extracted from the report of the Director-General of Observatories.

The rainfall in January 1932 was in large defect over the whole province. The maximum and mean temperatures were above normal. Humidity was in defect in Chota Nagpur.

In February, the month's rainfall was in large excess in Orissa, normal in Chota Nagpur and in moderate defect in Bihar. The minimum temperature was below normal in Orissa and the humidity was generally in defect in the province.

The total rainfall during March was normal in Orissa and in large defect elsewhere. The mean maximum temperature was above normal in Bihar. Humidity was in defect in Chota Nagpur and Bihar.

The rainfall for the month of April was in excess by 16 per cent in Bihar and was in defect elsewhere. Humidity was in defect outside Orissa.

The total rainfall during May was in moderate excess in Orissa, in slight defect in Chota Nagpur and in large defect in Bihar. Maximum temperature was above normal in Bihar. Humidity was in defect in Chota Nagpur and Bihar.

During June the rainfall was in moderate to large defect in the province. Both maximum and minimum temperatures were above normal in Chota Nagpur and maximum alone in Orissa and Bihar. Humidity was in defect in Orissa and Bihar. A heat wave prevailed between the 8th and 20th over the province, both day and night temperatures being markedly above normal on most of the days.

In July the rainfall was in moderate defect in Bihar. Maximum temperature was below normal in Orissa and above it in Bihar. Humidity was in defect in Bihar.

In August the rainfall was in slight to moderate defect in Bihar and Orissa. Other climatic elements were normal.

The total rainfall in September was in slight excess in Orissa, normal in Chota Nagpur and in slight to moderate defect elsewhere.

The rainfall in October was in moderate to large defect in the province. Maximum temperature was above normal in Bihar. Humidity was in defect in Chota Nagpur and Bihar.

In November the rainfall was in large excess in the province. Maximum temperature was below normal in Orissa and Chota Nagpur and the minimum above normal in Orissa. Humidity was in excess in Orissa.

In December the rainfall was in moderate to large excess in Bihar and in large defect elsewhere. Humidity was in excess in Orissa and in defect in Chota Nagpur.

The total amount of monsoon rainfall was in moderate defect in the province being 34" only, departing from the normal by 8·9".

2. The average price of common rice varied from nine seers to the rupee in Darbhanga to 28 seers 5 chittaks in Angul. In the majority of districts it was over 10 seers, and the price fell towards the end of the year.

The subjoined table shows the prices of the principal grains in the various districts.

* Average price of common rice at headquarter marts of each district during the year 1932.

Quantities per rupee in seers of 80 tolas.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	2	3	4	5	6	7	8	9	10	11	12	13
	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.	Srs. ch.
Patna ...	13 12	12 12	12 12	12 8	12 12	12 12	10 12	12 0	12 12	11 12	12 12	13 8
Gaya ...	11 0	11 0	11 0	11 8	11 0	11 0	10 0	10 0	10 0	10 0	10 0	11 0
Shahabad ...	11 0	11 0	11 0	12 0	12 0	12 8	11 8	10 12	10 8	11 0	12 0	12 4
Saran ...	11 0	11 0	11 0	11 0	11 8	11 8	11 0	11 0	11 8	11 0	11 8	12 0
Champaran...	11 0	11 4	11 0	11 0	11 8	11 0	11 0	11 0	11 0	10 12	11 0	11 8
Muzaffarpur ...	11 0	11 0	11 0	11 0	11 0	11 0	11 0	11 0	11 0	11 0	11 0	11 0
Darbhanga ...	11 8	10 0	10 0	10 0	10 0	10 8	10 4	9 0	12 0	11 0	10 0	11 8
Monghyr ...	10 8	10 8	10 8	11 0	11 8	11 0	10 0	10 0	10 8	10 0	11 0	11 8
Bhagalpur ...	12 0	12 10	12 4	12 8	12 4	12 6	12 4	11 8	11 4	12 0	12 0	12 4
Purnea ...	14 8	14 0	14 8	14 8	14 8	15 0	14 4	12 8	12 0	12 0	12 0	12 0
Santal Parganas ...	13 0	13 0	14 0	14 0	14 0	13 8	12 0	13 0	14 0	13 0	14 0	16 0
Cuttack ...	16 0	14 7	14 7	14 7	14 7	14 7	13 12	15 12	15 12	15 12	17 1	17 1
Balasore ...	20 0	18 8	17 8	17 12	17 12	16 0	16 12	17 0	17 12	19 4	16 0	18 12
Angul ...	25 3	24 2	23 0	24 0	23 0	18 14	18 14	21 0	23 1	23 1	24 2	28 5
Puri ...	15 12	14 7	13 7	15 12	14 7	13 2	13 2	14 7	14 7	14 7	14 7	15 12
Sambalpur ...	20 4	18 0	18 0	13 0	18 0	18 0	15 12	16 14	18 0	15 12	18 0	20 4
Hazaribagh ...	13 0	12 4	13 0	12 0	12 0	12 0	11 0	12 0	12 0	11 8	12 0	13 0
Ranchi ...	11 0	11 8	12 0	13 0	12 0	13 0	12 0	12 0	13 0	12 0	12 0	13 0
Palamau ...	13 0	12 0	12 0	12 0	12 0	12 0	10 0	12 0	11 8	12 0	13 0	13 0
Manbhum ..	12 0	12 0	13 0	12 0	12 0	12 0	11 0	11 0	11 0	11 0	10 0	11 0
Singhbhum...	12 0	11 8	12 0	12 0	12 0	12 0	11 0	11 0	12 0	12 0	13 0	14 0

* Price prevailing on the last day of the month.

The average prices of common rice varied from 6 seers and 8 chittaks to 25 seers and 3 chittaks during 1931 and 5 seers to 16 seers and 12 chittaks to the rupee during 1930. The average price of common rice during the five years 1927—31 was 4 seers 6 chittaks to 25 seers 3 chittaks per rupee and during the previous five years 1922—26 was 4 seers to $16\frac{3}{8}$ seers per rupee.

CHAPTER II.—Vital Statistics.

1. General Census.—

The population of the province according to the census of 1931 was 37,677,576 which figure has been used in calculating all the ratios in this report. The population and vital occurrences of the Orissa States are not included in the report. The population figure by the natural increase method, i.e., based on the excess of births over deaths was 38,173,927. This figure cannot be regarded as accurate on account of errors due to immigration and emigration and due to faulty recording of births and deaths. It is well known that a large number of people mostly labourers emigrate from this province to Assam and Bengal but the figures of emigration and immigration are not available.

2. The estimated population for the year under report was 38,044,879. This figure has been obtained by assuming that the population increased by arithmetical progression.

The following two statements give the estimated population according to age groups and the ratios of births and deaths from chief diseases calculated on the estimated population of 1932 :—

STATEMENT A.

Population according to age group of the Province of Bihar and Orissa.

—	Under one year.		One and under five years.		Five and under 10 years.		10 and under 15 years.		15 and under 20 years.	
1	2		3		4		5		6	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Census 1921 ...	488,341	490,725	1,434,380	1,565,592	2,735,082	2,648,138	2,170,629	1,827,533	1,433,777	1,350,656
Census 1931 ...	459,557	467,993	2,274,148	2,400,907	2,642,921	2,430,279	2,302,350	2,043,919	1,563,970	1,620,928
Decennial increase or decrease.	—28,784	—22,732	+839,768	+835,305	—92,161	—217,859	+131,721	+216,386	+130,193	+270,272
Annual increase or decrease 1932.	—2,878	—2,273	+83,977	+83,531	—9,216	—21,786	+13,172	+21,639	+13,019	+27,027

—	20 and under 30 years.		30 and under 40 years.		40 and under 50 years.		50 and under 60 years.		60 years and upwards.	
1	7		8		9		10		11	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Census 1921 ...	2,609,645	2,967,551	2,453,659	2,602,387	1,725,545	1,748,766	963,182	1,018,973	749,626	1,018,002
Census 1931 ...	3,218,213	3,422,319	2,714,059	2,737,421	1,865,043	1,811,586	1,069,752	1,099,899	684,125	848,187
Decennial increase or decrease.	+608,568	+454,768	+260,400	+135,034	+139,498	+62,820	+106,570	+80,926	—65,501	—169,815
Annual increase or decrease 1932.	+60,857	+45,477	+26,040	+13,503	+13,950	+6,282	+10,657	+8,093	—6,550	—16,981

STATEMENT B.

Ratios of births and deaths from chief diseases calculated on the estimated population of 1932.

—	Male.	Female.	Total
Births ...	17.1	16.3	33.4
Total deaths ...	21.4	19.4	20.4
Cholera ...	0.2	0.2	0.2
Small-pox ...	0.4	0.4	0.4
Plague ...	0.07	0.1	0.09
Fevers ...	15.6	14.1	14.8
Dysentery and Diarrhoea ...	0.4	0.4	0.4
Respiratory diseases ...	0.2	0.1	0.1

3. The total number of births in this province during the year was 1,272,296 as compared with 1,276,010 in the previous year. The provincial birth-rate for the year 1932 was 33·8 as compared with 33·9 in 1931 and 36·2 in 1930. The average birth-rate for the last ten years was 33·0.

The statement below gives particulars regarding birth-rates in other provinces :—

Provinces.					Birth-rate per mille of population.
Bihar and Orissa	...	...	...	...	33·8
Bengal	...	...	...	...	26·6
United Provinces	...	...	...	...	34·6
Central Provinces	...	...	...	...	45·2
Punjab	...	...	...	...	41·3
Bombay	...	...	...	...	35·8
Madras	...	...	...	...	36·0
Burma	...	...	...	...	27·7
Assam	...	...	...	...	30·0

4. Birth Registration.—

The highest birth-rate was recorded in the Patna Division. Of all the districts Gaya recorded most births (44·4) and the lowest birth-rate was recorded in the district of Singhbhum (25·2). Siwan, Revelganj and Tikari head the municipalities with the high rates of 51·8, 45·3 44·5 respectively, whilst Sahebganj, Madhupur and Dumka have recorded the lowest rates, namely 6·2, 7·2 and 7·5 respectively.

The general birth-rate for the towns in the province was 21·8 and for the districts, excluding towns 34·2. The majority of the towns and districts reported rates near the mean figures. The exceptions, both high and low, are few, and the variations occur amongst comparatively small populations and do not greatly affect the average rate.

5. Deaths.—

The low death-rate in the year under report is mainly accounted for by the absence of severe epidemics during the year. The total number of deaths in the province during the year was 775,945 as compared with 1,002,699 in the previous year. The provincial death-rate for 1932 was 20·6 as compared with 26·6 in 1931 and 29·6 in 1930. The average death-rate for the last ten years was 23·8.

The statement below gives a comparison of death-rate in other provinces :—

Provinces.					Death-rate per mille of population.
Bihar and Orissa	...	...	...	...	20·6
Bengal	...	...	...	...	20·5
United Provinces	...	...	...	...	22·2
Central Provinces	...	...	...	...	26·8
Punjab	...	...	...	...	24·7
Bombay	...	...	...	...	23·0
Madras	...	...	...	...	21·9
Burma	...	...	...	...	17·3
Assam	...	...	...	...	18·9

6. Death Registration.—

The highest district death-rates were recorded in Balasore (27·0), Palamau (26·0), Cuttack (25·7) and the lowest in Singhbhum (12·8), Manbhum (15·7) and the Santal Parganas (16·1). Amongst the towns of the province, the highest rates were recorded in Gaya (32·8), Kendrapara (30·2) and Puri (28·6), and the lowest in Sahebganj (1·9), Dumraon (3·4) and Katihar (3·4). Obviously these low figures are due to defective registration.

The rate of increase in the population, i.e., the excess of birth-rate over the death-rate in the province was 13·2 as compared with 7·3 in the previous year.

The Orissa Division recorded the highest death-rate and Balasore district recorded an excess of deaths over births by 2·5 per thousand of population.

7. Mortality according to age, class and sex.—

The rate of mortality calculated on the census figures of 1931 for children under one year of age amongst male infants was 138·2 and amongst female infants 119·0 per mille as compared with 218·3 and 177·0, the corresponding rates for 1931. But when based on the actual births recorded in 1932, the infant mortality was 138·3 for males and 118·9 for females per mille, with a total infant mortality of 128·8 per mille, against a total infant mortality of 143·6 per mille in 1931. The rate for the urban areas was 150·3 and that for the rural areas 128·3. At the close of the first year of life, the rates fell to 37·2 for males and 32·5 for females, as compared with 49·3 and 44·4 in the preceding year. There was a fall in all the rates at the other age periods also. The lowest rates were recorded for the age periods between 10 and 15 years as in the preceding year. As usual the total combined mortality amongst males was higher than that amongst females in the ratio of 110 to 100.

There were as usual considerable differences in the death-rates amongst the different classes of the community. The death-rate was highest amongst Hindus (21·1) and the lowest amongst Buddhists (9·8). The Muhammadan death-rate was (17·6), the Christian death-rate was (14·8) and that of other classes (20·3).

8. Verification of the registration of vital occurrences.—

In the 58 municipal towns, where registration is compulsory, the accuracy of 28,099 vital occurrences was investigated by the health officers of the large towns and by the officers of the Vaccination Department. Five hundred and forty-six omissions were detected, 439 prosecutions were instituted, and 262 convictions were obtained. This forms only a very small fraction of the births and deaths in the province. The registration of vital occurrences is not compulsory in rural areas and the reporting agency in these areas, as well as in most municipalities, is the police. This system, although it obtains throughout India, cannot be said to be satisfactory, more especially with regard to the classification of the causes of death.

There are only three whole-time health officers in the municipalities of Patna, Gaya and Puri in the province, all of whom are paid by Government, and one part-time health officer at Bhagalpur.

For some two years, or more, an attempt has been made to transfer the responsibility for the collection of vital statistics from the police to the municipal authorities, in the municipalities of Patna and Ranchi. So far the police in these two municipalities have not been relieved of this duty, and the information has been collected from both sources for purposes of comparison. In Patna the health officer has been made the registrar for vital statistics, and satisfactory results have been obtained. Even in Ranchi where there is no health officer, there is reason to consider that the figures submitted by the municipality are more accurate than those sent in by the police. The experiment has now been extended to other municipalities, e.g., Gaya, Puri, Chapra and Muzaffarpur and it is hoped that the responsibility for the registration of vital statistics will be placed entirely in the hands of the municipal authorities.

In rural areas 45,934 vital occurrences were verified by the vaccination staff as against 763 in 1931. In these areas the problem is more difficult, but already in districts where health officers are employed, these officers supply valuable information, more particularly with regard to the occurrence of epidemic diseases, from which the Civil Surgeons are able to correct the figures supplied by the police.

9. Publication of vital statistics.—

The preparation and publication every week of the vital statistics of all the municipalities in the province with a population of 20,000 and over have been carried out throughout the year.

Weekly epidemic reports from all districts showing the number of seizures and deaths from cholera, small-pox, plague and influenza are also collected, summarized, and circulated. The reports are published in the *Government Gazette*, and also by the courtesy of the management, in several newspapers of the province. By the publication of these statistics it is hoped to keep the public informed of the actual state of health of the large towns, and of the prevalence of disease in the districts, and to demonstrate the utility of vital statistics.

CHAPTERS III AND IV.—State of Public Health in the province and history of chief diseases—Epidemiology.

1. Comparative incidence of chief diseases.—

The annexed statement compares the ratios under the chief heads of mortality in 1932 with the average ratio of the previous ten years :—

	Urban.		Rural.		Combined.	
	Ten years' average.	1932.	Ten years' average.	1932.	Ten years' average.	1932.
1	2	3	4	5	6	7
Cholera ...	1.1	0.2	1.6	0.2	1.5	0.2
Small-pox ...	0.4	0.04	0.3	0.4	0.3	0.4
Plague ...	0.5	0.004	0.3	0.09	0.3	0.09
Fevers ...	8.9	6.7	16.4	15.3	16.1	15.0
Dysentery and Diarrhœa ...	0.9	0.7	0.5	0.4	0.6	0.4
Respiratory diseases ...	0.6	0.5	0.1	0.1	0.2	0.1
Injuries ...	0.4	0.4	0.3	0.3	0.3	0.3
All other causes ...	5.5	4.1	4.4	3.9	4.5	4.0
Total ...	18.4	13.0	24.0	20.9	23.8	20.6

It will be seen from the above table that there was a reduction in the number of deaths from all causes except small-pox. There was a marked decrease in the number of deaths from cholera as compared with the figures for 1931, namely 9,348 in 1932 as compared with 40,943 in 1931, the death-rate being five times less than the year 1931 which was also a mild year. This reduction in the mortality from cholera was the principal factor in the lowered death-rate, recorded in 1932.

The reduction in the number of deaths from fevers might, to a great extent, be attributed to the poor monsoon during the year under report. This reduction cannot however be attributed to anti-malarial operations as very little of these are being carried out in the province. There is no doubt that many districts in the province suffer from malaria but until a more accurate system of recording vital statistics is evolved, than what now obtains, it is not possible to estimate the exact part that malaria plays in the recorded death-rates from fevers.

2. Cholera Statistics.—

The provincial death-rate from cholera fell from 1·1 in the previous year to 0·2 in 1932. The districts of Cuttack and Balasore recorded the highest death-rate from cholera, namely 1·1 and amongst the towns, Lohardaga (1·9), Kendrapara (1·6), Balasore and Puri (1·0).

3. Cholera in the province.—

The total number of deaths in 1932 was 9,348 as compared with 40,943 in 1931. Again the districts in North Bihar and most of those in South Bihar suffered least from this disease, the Orissa districts being the most affected in the province. An early outbreak in the Balasore district which followed the Chandaneswar mela gave cause for some anxiety but the prompt action taken by the Chairman of the district board, who personally visited all the affected areas, drafting in medical personnel from the unaffected areas and assisted by the three epidemic doctors of the Government Public Health Cadre, soon had the situation in hand. The Rath Jatra festival at Puri passed off fairly successfully; and the sanitary measures taken in the town under the energetic control of the Health Officer were entirely satisfactory. No epidemic in the Puri district followed the Rath Jatra.

4. Cholera preventive measures.—

With the growth of public health organizations in districts, there is rapidly being created, in those districts which employ health officers, an efficient and well-trained staff to deal with outbreaks as soon as they occur. The more important districts, eleven in number, now have health officers, the salaries of whom are either paid directly by Government or indirectly by means of grants.

Government maintains a permanent staff of epidemic doctors of the assistant surgeon class who are available for duty on demand from any district, and in bad years temporary men are also employed to still further assist local bodies in times of stress.

Provision is also made in the Public Health budget for 100 epidemic vaccinators for employment anywhere in the district in emergency. As far as possible, however, district boards are expected to deal with epidemics with their own health staffs, where such exist, but the Government reserve is always available on demand from the Civil Surgeon or Chairman of the district board.

Government also maintains a reserve of disinfectants, such as Bleaching Powder and Permanganate of Potash with Civil Surgeons, and Kaolin for the treatment of cholera, and these are available to assist local bodies in dealing with epidemics when their supplies run short. Government also supplies cholera vaccine free of charge on demand from Civil Surgeons and Chairmen of local boards. A large supply of this vaccine is maintained in cold storage at the Vaccine Depot at Namkum and orders are placed by telegram for its despatch when required. This free issue of cholera vaccine was begun in 1928. Since that year the demand for vaccine had steadily increased till 1930 and has been less during 1931-32 due to diminished cholera incidence in the province. In 1926 and 1927 when local bodies obtained their supplies on payment the number of doses of vaccine issued was 5,790 and 38,566 respectively. In 1928, 1929, 1930, 1931 and 1932 the number of doses issued were 240,000, 656,300, 731,000, 666,510 and 241,235 respectively.

Inoculation is not compulsory, and the number of inoculations done therefore varies from year to year. The demand for inoculation is to some extent dependent on the presence of cholera, and the virulence of the outbreak.

But the steady progress that has been made with this preventive measure is an indication of its appreciation by the masses, and there are indications now that when the cholera season approaches people will come forward for inoculation, if the effort is made to carry out this preventive measure, even when cholera is not present in the area. As soon as a case occurs this demand increases.

Preventive inoculations are carried out at all important melas, special attention being given to Puri during the important car festival.

The use of Bacteriophage for the prevention and treatment of cholera is dealt with in Chapter XV.

5. Small-pox.—

The total number of deaths from small-pox during 1932 was 16,466 as compared with 8,028 in 1931. The death-rate rose from 0·2 in 1931 to 0·4 in 1932. The years 1925, 1926, 1927 were severe small-pox years and another severe outbreak was apprehended in 1932-34. In 1932 the highest death-rates were recorded in the districts of Sambalpur (1·5), Shahabad (1·0), Saran (1·0) and Puri (1·0). The districts of Singhbhum (0·003), Manbhum (0·01) and Hazaribagh (0·03) returned the lowest death-rates from small-pox. In the town areas small-pox was most severe in Sitamarhi, Madhubani and Gaya, which returned death-rates of 2·4, 1·5 and 1·4 respectively.

Small-pox is a preventable disease and considering the state of sanitation in the Indian towns and villages, wholesale vaccination and re-vaccination is necessary to prevent the occurrence of the disease. Until 1931 primary vaccination was only compulsory in municipalities and in the districts of Patna, Muzaffarpur and Hazaribagh, and in a few isolated areas in certain districts. In 1932, primary vaccination was made compulsory in Champaran, Purnea, Bhagalpur, Darbhanga and Gaya districts. Primary vaccination alone will not stamp out the disease, as only a small proportion of the population is affected by it and the immunity conferred by it only lasts for about seven years. During epidemics it has been sometimes reported that most of the deaths occur amongst unprotected children up to 10 years of age. It is a regrettable fact that even in places where the Vaccination Act has been introduced, primary vaccination has not been pushed on as it should have been.

Re-vaccination is being carried on on a policy of persuasion. The licensed vaccinators employed for this work are not very keen to do re-vaccination, as they do not get any fees for it, and the people themselves are generally unwilling to take re-vaccinations. Primary vaccination should be compulsory throughout the province and re-vaccination should also be made compulsory.

With the introduction of compulsory vaccination and the extension of sections 92 to 96 of the Local Self-Government Act the control has been handed over to the local bodies and the health officers of Muzaffarpur, Purnea, Darbhanga, Patna, Champaran, Bhagalpur and Gaya have been appointed Superintendents of vaccination. The staff of the district board health organizations in all these districts except Bhagalpur and Darbhanga have taken up the duties connected with the inspection of vaccination and the Government staff of inspectors and sub-inspectors have been withdrawn from the above districts. It is hoped that some more districts will take over the control and management of vaccination similarly next year. Government however will still exercise control over this important public health measure through the Assistant Directors of Public Health and with a view to assist local bodies, Government have sanctioned the appointment of a special District Inspector of Vaccination for each of the three circles under the Assistant Directors of Public Health.

Vaccine lymph manufactured at the depot is supplied free throughout the province.

6. Plague statistics.—

The death-rate from plague for the year 1932 was 0·09 as compared with 0·1 in the previous year; the average rate for the last ten years was 0·3. The disease is practically confined to the districts north of the river Ganges.

The districts of Muzaffarpur, Darbhanga and Saran suffered most, and recorded the largest number of deaths. The disease is confined to the winter months and dies out completely in the hot weather and rains. As there is very little cholera in the province during the winter months the Government cadre of epidemic doctors are always available for plague duty during these months.

Anti-plague vaccine is stocked at Namkum and this is supplied free on demand by telegram.

The districts which reported the highest mortality were Muzaffarpur (0.5), Saran (0.3) and Darbhanga (0.2). The rate of mortality in towns was (0.004) and in the rural areas was (0.09).

7. Dysentery and Diarrhoea.—

The death-rate from dysentery and diarrhoea was 0.4 as compared with 0.6 in the previous year, and an average rate of 0.6 for the last ten years.

As usual this disease was most prevalent in the Orissa Division, and of the total deaths amounting to 15,727 this division reported 12,606.

The towns which recorded the highest death-rate from these diseases were Puri (5.1), Kendrapara (3.3) and Sambalpur (2.3).

The prevalence of dysentery and diarrhoea in Orissa is probably associated with the climatic conditions, and is to a large extent due to the bad state of the water-supply in many parts of this division.

These diseases resemble cholera in their nature and in their incidence. They belong to the group of intestinal disease, the transmission of which is associated with the infection of the individual by contact, or with the contamination of the water-supplies by excreta, or of food by flies. They tend to become epidemic under the same conditions and by the same means which favour the spread of cholera, and their prevention, like that of cholera, can best be effected by the improvement of water-supplies, by better conservancy and by prompt disinfection of the excreta of the sick.

CHAPTER V.—Fairs and Festivals.

1. A large number of melas are held every year in different parts of the province. Many of these are of purely local interest and are attended by the people of the district in which it is held and of the adjoining districts. The two sacred Hindu towns of Gaya and Puri attract pilgrims throughout the year. In Gaya the largest collection of pilgrims assemble during the Pitripaksh mela held in September while at Puri, the largest melas are the Dol jatra, Snan jatra and the Rath jatra or car festival, the latter being the most important and attracts pilgrims from all over India.

The Sonapur fair held in the Saran district in November is largely a cattle fair. An important bathing festival takes place there and for about a fortnight a large number of people visit Sonapur.

2. The Snan, car and return car festivals were held this year on the 18th June, 5th July and 13th July respectively. The number of pilgrims that visited Puri during the festivals was about 70,000, of this about 50,000 travelled by rail, as estimated from the number of tickets collected, and about 2,000 by road. The number of pilgrims present at Puri on the big day, i.e., on the 5th July 1932 has been roughly calculated at 70,000. The sanitary and preventive arrangements were made from 16th June 1932 to 15th July 1932. Three medical officers of health and three sub-assistant surgeons were deputed by the Public Health Department and one medical officer of health was temporarily appointed by the Puri municipality.

All the public wells of the town were cleaned of silt before the festival. All these wells, including a good many private ones were disinfected with chlorinated lime every third or fourth day and at times every day as was thought necessary till the 3rd July 1932. From the 4th July disinfection of wells was stopped and the wells were treated with cholera bacteriophage till the end of the festival.

The important tanks of the town, specially the Narendra, Swetganga and Markande tanks, were treated with chlorinated lime as often as it was thought necessary. Five important public wells were fitted with petrol pumps, overhead tanks and taps and six wells were fitted with ordinary hand pumps, by the Engineering branch of the Public Health Department. Twenty wells were also fitted with hand pumps with coolies to pump water out of the wells by the municipality.

Propaganda work for prevention of cholera was made by means of magic lantern demonstrations, given during the festivals by the Officer in charge of the Publicity Bureau and also by suitable posters hung at different parts of the town. Cholera inoculations were as usual pushed on in the different parts of the town as well as at the railway station, the total number of inoculations performed during the season being 35,598.

The following figures are of interest as they illustrate the steady progress that has been made with these important preventive measures since 1927. These figures are only for the town itself, and for a short time immediately preceding the Snan jatra and following the Rath jatra :—

Year.					No. of inoculations.
1927	...	...	...	...	7,937
1928	...	...	...	...	16,869
1929	...	...	...	...	32,155
1930	...	...	...	...	42,047
1931	...	...	...	...	34,226
1932	...	...	...	...	35,598

Cholera bacteriophage was administered to all cholera contacts and an attempt was made to distribute the phage amongst the pilgrims through drinking water.

Total number of attacks from cholera during the festival at Puri was 51 with 7 deaths. Of these 4 were treated privately and the rest were removed to cholera hospital. It is gratifying to note that there was no report of cholera on the Car and the return Car festival days.

Three different volunteer organizations worked during the car festivals. They rendered good services, such as carrying the sick and the injured to the hospitals, giving first aid and distributing drinking water. In this connection the names of the Puri Seva Samiti and St. John Ambulance volunteers deserve mention.

3. The Pitripaksh mela at Gaya was held from 14th to 30th September 1932. 63,668 pilgrims visited the place during the mela period against 64,000 of the last year. The usual sanitary arrangements were made for the mela which passed off successfully. Only two pilgrims were attacked with cholera during the mela of whom one died. Both the cases were admitted to the cholera hospital. The general health and the sanitation of the town was quite fair, both before and during the mela time.

4. The Sonapur fair or Harihar Chhatra is said to be the biggest fair of its kind in the world. It is almost entirely a commercial fair where cattle, horses and elephants are brought for sale. An important Hindu bathing ceremony takes place during the fair which attracts thousands of pilgrims from the neighbouring districts. The mela started from 9th November 1932 and lasted for about a fortnight. Similar arrangements were made by the Public Health Department and district board authorities as in previous years. No case of cholera or any other infectious disease amongst the pilgrims was reported. New sheds were constructed for the accommodation of cases of infectious disease, and a permanent water-supply from deep borings has been arranged which is distributed by means of pipes and hydrants throughout the mela area since 1929.

The water-supply was improved this year by putting up nine stand-posts at Hathisar (elephant lines) and two on the new road at Nakhas. Four temporary connections were given at Bailhatta on the Mahi river by

extending the pipe line and ten for the officers and two at the English bazar. Three new distribution tanks, i.e., overhead reservoirs each fitted with eight to ten taps and fed directly from the mains were added to the fifteen existing ones in different parts of the mela area.

As the Bailhatta extended to over a couple of furlongs beyond the water-supply, it is proposed to augment the temporary fittings to this area during the next mela.

5. Other important melas in the province are Shivaratri mela at Deoghar, melas at Hijla in the Santal Parganas and Singheswar mela in the Madhipura subdivision of the Bhagalpur district. The Assistant Directors of Public Health visit these melas and help the local authorities in making the arrangements. Epidemic doctors are detailed when necessary and when asked for.

CHAPTER VI.—Urban Sanitation.

1. During the year under report 38 out of the 58 municipalities in the province were inspected by the Assistant Directors of Public Health and full reports on these inspections were submitted to Government. The financial position of most towns remains unchanged, and there is very little prospect of employment of suitably-qualified health officers in the larger towns at present.

There are now only three whole-time health officers of municipalities in the towns of Gaya, Patna and Puri ; and one part-time health officer at Bhagalpur. The former are all paid for by Government and the latter receives a small remuneration from municipal funds for his part-time services. The municipality of Monghyr has appointed an officer of sub-assistant surgeon qualification to look after the sanitation of the town. The absence of health officers in municipalities is most acutely felt when there is an outbreak of epidemic disease in these towns. The sanitary inspectors are generally incapable of dealing with such an outbreak and the services of an epidemic doctor has to be requisitioned from the Government. This ought not to be the case. Every municipality should be able to deal with such outbreaks with its own staff and Government epidemic doctors should only be necessary in rural areas where there are no medical men and a paucity of health inspectors.

With regard to the recommendations of the Royal Commission on Labour regarding the need for qualified municipal health officers, it is thought that these recommendations could not be carried through in the present state of the finances of the municipalities. It is under the consideration of Government whether L. M. P.s with a suitable public health qualification (L. P. H.) could be appointed in smaller municipalities as health officers. A trial is being given in the Monghyr municipality and the result is being watched.

The need for the appointment of health officers in the bigger municipalities of Muzaffarpur, Darbhanga, Cuttack and Ranchi is immediately felt for the supervision of the subordinate staff employed by them. These officers, if appointed in the former three municipalities could, in addition to their sanitary duties, supervise and perform the duties of a Superintendent of Vaccination since the inspection of vaccination work has been transferred from the Government staff to these local bodies.

Inspection reports of the Assistant Directors of Public Health reveal that the sanitation of the Ranchi municipality has been deteriorating year by year and considering the importance of the town and the occurrence of many diseases, the appointment of a health officer is considered very necessary. The same remarks hold good for the Cuttack municipality.

Action is generally taken on the recommendations of the Assistant Directors of Public Health, where no heavy expenditure of money is involved, but there is still room for considerable improvement more specially in the congested parts of the towns. Several schemes for improvement in drainage are being held up for want of money.

2. Expenditure on sanitation in municipal towns.—

The statement below shows the receipts and the expenditure for sanitary purposes during the year 1931-32 as compared with those of the previous year :—

Number of municipalities.	Total receipt including opening balance.		Heads of expenditure.	1930-31.	1931-32.	Percentage of expenditure to the total receipts.	
	1930-31.	1931-32.				1930-31.	1931-32.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
58	61,15,933	60,14,792	Conservancy ...	11,30,534	11,25,659	18·4	18·7
			Drainage ...	1,71,205	1,74,761	2·8	2·9
			Water-supply ...	4,84,390	5,85,907	7·9	9·7
			Vaccination ...	14,719	14,876	0·2	0·2
			Epidemics ...	27,383	19,952	0·4	0·3
			Markets and fairs ...	47,225	53,973	0·7	0·8
			Other sanitary charges ...	2,155	3,178	0·03	0·05
			Public Health staff ...	45,106	44,560	0·7	0·7
			Total ...	19,22,717	20,22,866	31·4	33·6
			*Contagious diseases hospitals.	1,89,721	2,35,865	...	...

* This represents cholera hospitals and leper asylums, etc. An expenditure of Rs. 2,35,865 has been incurred in 1931-32. The expenditure is mainly met from Government grants.

3. Chief Sanitary Works in municipal towns.—

The details of expenditure under this head are dealt with in the report of the Superintending Engineer, Public Health Department.

CHAPTER VII.—Rural Sanitation.

1. The following district boards had each an organized health scheme during the year, viz., Patna, Gaya, Muzaffarpur, Saran, Champaran, Darbhanga, Bhagalpur, Purnea, Cuttack, Puri and Balasore, and each had a health officer with a minimum requirement of subordinate staff, consisting of, in some cases, assistant health officers with a sub-assistant surgeon's qualification and health inspectors and assistant health inspectors trained from the provincial Sanitary School, Gulzarbagh and sanitary jamadars and sweepers, their number varying according to the local requirements and the finances of the individual boards. Of the eleven district boards, five districts, viz., Patna, Muzaffarpur, Cuttack, Puri and Balasore received contribution towards their public health schemes from Government equal to half of their total cost, while the district boards of Saran, Champaran, Gaya and Bhagalpur employed Government medical officers of health whose entire pay was met from the provincial revenues. The districts of Darbhanga and Purnea employed health officers entirely paid for from the district board funds.

In the 11 districts mentioned above much useful work was done in the prevention of disease and in the education of the public in public health matters. Several of the health officers have undertaken the medical examination of school children in schools not visited by the Government school medical officers.

The duties of these staffs have been many and varied on account of the constant presence of epidemics in the province. Nevertheless the staffs have been well reported on by the Assistant Directors of Public Health. In most cases they appear to have taken prompt and immediate measures to deal with the outbreaks. Some of these district boards were handicapped on account of most of their subordinate staffs being not qualified to carry out inoculations against cholera and plague. In times of epidemics of these diseases therefore they had either to employ temporary medical officers or to requisition for help from the Public Health Department when the district board staff were found to be insufficient to adequately deal with the epidemics.

It would be interesting to note that with the increase of the efficiency and working experience of these health organizations where they exist, the need for calling epidemic doctors from the Public Health Department has been diminishing steadily.

During the year a further responsibility in the matter of the control of vaccination was contemplated to be entrusted to the district board staff. It was thought by the Retrenchment Committee that if the district board staff could be trained in vaccination work, the control of vaccination might be transferred from Government to the district board with or without the extension of the Bengal Vaccination Act and Government could thus effect economy by discharging their own staff in such districts. With this end in view, the health staffs of all the above districts (except Patna to which the control of vaccination had already been transferred) received training in vaccination work. The districts of Muzaffarpur and Champaran undertook the management and control of vaccination during the year and Gaya, Darbhanga and Bhagalpur towards the close of the year.

Besides the above district boards the districts of Shahabad, Monghyr, Manbhum, Hazaribagh and Ranchi, where there are no health officers nor any fully organized health scheme, were offered the services of a Government paid health officer provided they met his travelling allowance and employed an adequate number of health inspectors and other staff at district board expense in order that the responsibility for vaccination could be transferred from the Civil Surgeons to them and the staff with a health officer could carry out all the duties connected with prevention of disease. It is a pity that none of the above districts could avail of this offer on grounds of financial stringency except Shahabad which in the beginning of the following year took a Government paid health officer.

The need for the appointment of a health officer for the Monghyr district cannot be emphasised too much. The district is a hot bed of cholera, plague and small-pox and although it employs a subordinate staff for epidemic work the services of a health officer are essentially required to organize and supervise the work of the staff efficiently. The Inspector-General of Civil Hospitals, the Civil Surgeon and the Assistant Director of Public Health have repeatedly recommended the appointment of a health officer for this district but the district board has not yet found its way to appoint one or to take the loan of a Government paid health officer.

Similarly the districts of Manbhum, Hazaribagh and Ranchi ought to have a health officer each. Fortunately for these districts no epidemic of a severe nature has occurred for the last few years but should a severe epidemic of any disease occur, the existing small staff will not be able to deal with it.

Each of the remaining districts has a small nucleus of a health organization and recruits more staff when an emergency arises or applies to Government for the loan of epidemic doctors when an epidemic occurs. The advantages of having a fully organized health staff under a qualified health officer are obvious. Success or failure in dealing with an epidemic depends upon the rapidity with which intelligent preventive measures are taken and if a staff is always available on the spot for such preventive measures, success is assured.

Where district health organization exists, some effort is being made to improve the sanitation in villages but progress is slow. The Assistant Directors of Public Health inspected 21 Unions during their winter tours.

2. Expenditure on sanitation by district boards—

The following statement shows the receipts and expenditure of district boards under the principal headings of sanitation. :—

Number of district boards.	Total receipts including opening balance.		Heads of expenditure.	1930-31.	1931-32.	Percentage of expenditures to the total receipts.	
	1930-31.	1931-32.				1930-31.	1931-32.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
19	1,66,83,484	1,59,57,150	Conservancy ...	3,26,445	2,99,345	1·9	1·8
			Drainage ...	30,060	5,404	0·1	0·03
			Water-supply ...	1,55,920	1,56,155	0·9	0·9
			Vaccination ...	20,744	25,858	1·2	0·1
			Epidemics ...	71,175	65,980	0·4	0·4
			Markets and fairs ...	39,211	17,973	0·2	0·1
			Other sanitary charges.	24	...	0·0001	...
			Total ...	6,43,579	5,70,715	3·8	3·5

CHAPTER VIII.—Malaria.

1. Fever Statistics—

There was an encouraging reduction in the number of deaths from fevers in 1932 as compared with those in 1931. But a total mortality of 564,666 or 15·0 per thousand is a very high figure. The term fever embraces a large number of diseases where fever has been a prominent symptom, and the whole of this number of deaths cannot be ascribed to malaria alone, although malaria undoubtedly accounts for the bulk of these deaths either directly or indirectly by lowering the vitality of its victims and thus rendering them an easy prey to other more fatal diseases.

Most parts of Orissa, the districts of Singhbhum, Purnea and Bhagalpur are known to be malarious. Anti-malarial surveys have been carried out in Purnea and Madhubani municipalities during the year and recommendations have been made to improve conditions in the areas investigated.

The death rate for fevers during 1932 was 15·0 as compared with 19·4 in 1931 and the decennial average of 16·1. The highest mortalities were recorded in the districts of Palamau (21·3), Angul (18·3) and Purnea (18·1) amongst towns, Gaya (18·4), Tikari (18·4) and Revelganj 14·7.

2. Sale of quinine—

Sale of quinine treatment in the various post offices in the province has been in force for many years. These treatments are supplied to the post offices by the Civil Surgeons, who obtain their requirements from the Presidency Jail at Calcutta, where the products of the cinchona plantations in Bengal are made up into tablets. Twenty tablets packed in small glass tubes constitute one treatment. These treatments are now sold by the post offices at 5½ annas per treatment, but the amount purchased annually cannot be regarded as satisfactory.

The sale of quinine treatments during 1932 amounted to a total of 455·3 pounds of quinine sulphate as compared with 536·4 pounds in the previous year. The largest quantities were taken by Cuttack, Purnea, Singhbhum, Balasore and Santal Parganas districts. Quinine was chiefly sold through the agency of post masters, and to a small extent through other agencies.

3. Spleen Census—

The Assistant Director of Public Health, Chota Nagpur and Orissa Circle, carried out a spleen census in the districts of Ranchi, Singhbhum, Sambalpur, Cuttack, Angul, Puri, Balasore and Manbhum during his tours in connection with the inspection of vaccination. The children were collected from 1,057 villages. The number of villages which showed children with enlarged spleen was 467. The total number of children inspected was 15,348 and number of children found with enlarged spleen was 1,829.

CHAPTER IX.—Maternity and Child Welfare.

The Bihar and Orissa Maternity and Child Welfare Society is worked by a Managing Committee with Lady Sifton as the President, the Inspector-General of Civil Hospitals as Honorary Secretary and the Accountant-General, Bihar and Orissa, as Honorary Treasurer.

The following seven Centres continued to do very useful work throughout the year :—

- (1) Patna City,
- (2) Gulzarbagh,
- (3) Patna West,
- (4) Cuttack,
- (5) Balasore,
- (6) Muzaffarpur,
- (7) Monghyr.

The subject is dealt with by the Inspector-General of Civil Hospitals.

CHAPTER X.—School Hygiene and Medical Inspection of school children.

1. Since 1920 Government have employed special staff of officers for the medical examination of school children in high schools. These examinations have been extended to Middle Schools also.

There is a School Medical Officer of Assistant Surgeon grade and Assistant School Medical Officer of the sub-assistant surgeon class in each of the five subdivisions of the province. One Lady School Medical Officer was also employed during the year under report for girls' schools throughout the province.

These officers inspect the scholars of all high schools and most of the middle schools of their respective divisions and record their findings in certain standardised forms. Their duties include the medical inspection of all scholars, the inspection of school buildings, the delivery of lectures on hygiene with magic lantern demonstrations to the school boys and the delivery of lectures to the village gurus during the long vacation period.

2. The medical inspection of scholars—

All new scholars admitted to the school since the previous visit of the school medical officer are thoroughly examined and a complete medical history of each new entrant is recorded on the prescribed form. All scholars found to be suffering from physical defects at a previous inspection are re-examined and a further note on the particular defects recorded. At the end of the inspection, parents or guardians of boys found to be suffering from physical defects are informed of the particular defects the boy is suffering from, and they are recommended to consult their medical attendants or take the child for treatment to the nearest dispensary. This information is given on a prescribed form. Another form is used for the poorer children and is addressed to the medical officer in charge of the local hospital or dispensary. The medical officer is asked to note on the counterfoil of the form the treatment the boy has received.

The following is a statement showing the number of children examined by each of the School Medical Officers and the number of defectives found :—

Division.				Total number of children examined.	Total number of defectives.
Patna	...	...	...	1,771	1,501
Tirhut	...	...	...	1,419	679
Bhagalpur	...	...	...	1,435	1,022
Orissa	...	...	...	1,637	945
Chota Nagpur	...	...	...	4,056	2,327

The Lady School Medical Officer examined a total of 483 children and reported 66·5 per cent to be suffering from some kind of physical defects.

The bulk of these defects are of a minor nature such as caries of the teeth, skin diseases, enlarged tonsils, etc., but major defects such as defective visions, heart affections, etc., were also brought to light, and to the notice of the parents or guardians.

A few cases of early tuberculosis and leprosy were also reported by all the school medical officers, and the importance of early diagnosis in these diseases, and prompt and suitable treatment when they are detected cannot be exaggerated.

3. The inspection of school premises—

These inspections and the reports on them have resulted in many minor improvements in school buildings and hostels.

4. Lectures on Hygiene—

These are fairly comprehensive and are illustrated in many cases by magic lantern demonstrations. Attendance at these lectures is compulsory, but as hygiene is neither a compulsory nor an optional subject in the Matriculation Examination, the lectures do not receive quite the attention they deserve. They, however, afford an excellent opportunity for the propaganda of knowledge and information on public health and ought to produce some results.

During the school vacation the School Medical Officers delivered lectures on hygiene and public health to primary school teachers and gurus under arrangements made in consultation with the Inspectors of Schools.

CHAPTER XI.—Health Propaganda.

1. The Officer in charge of the Public Health Bureau carried out the usual propaganda work during the year, issuing pamphlets and posters to local bodies and contributing popular articles on public health subjects to the Press.

In addition to propaganda work done by the Officer in charge of the Public Health Bureau, the Assistant Directors of Public Health take advantage of every opportunity that offers to lecture to the people on public health subjects. They are all provided with magic lanterns and complete sets of slides on all aspects of public health.

The Assistant Director of Public Health, South Bihar Circle, attended the Bihar and Orissa Co-operative Federation Congress at Monghyr on the 8th November, 1932, and organized a health propaganda during the congress session by exhibition of pictorial posters on child welfare, cleanliness, cholera, small-pox, etc. and by magic lantern demonstrations on public health subjects.

Regularly organized lectures and magic lantern demonstrations are also delivered at all the important melas and at the meetings of the Co-operative Societies and aman sabhas. The epidemic doctors also have opportunity for propaganda work when employed in rural areas on epidemic duties and much has been achieved through the efforts of the epidemic doctors.

2. Red Cross Society—

The chief activities of the Bihar and Orissa branch throughout the year have been the supplies of comforts to patients in military civil and mission hospitals, care and treatment of soldiers invalided from the Army, provision of comforts and medical supplies during epidemics of cholera, small-pox and plague, supply of milk to tubercular babies and financial assistance towards maternity and child welfare work in the province.

The Red Cross Health Museum was started in 1930 and is under the direct control of Director of Public Health. During the year an excellent model illustrating an "Insanitary Village" was added to the collection of exhibits in the Red Cross Museum and glass cases were provided to protect the existing exhibits from dust and damage. The Health Museum is located at the Patna Museum and the average daily attendance during the year has been 350. The doctors of the Public Health Department attend the museum daily except when employed on epidemic duties. As the year 1932 has been a mild cholera year it has been possible to detail a doctor of the Public Health Department to explain the exhibits to the people throughout the year.

In March 1932 the Branch Society appointed the Inspector-General of Civil Hospitals as Chairman and the Director of Public Health as the Honorary Secretary of the Anti-Tuberculosis Sub-Committee with five co-opted members to consider the question of starting a tuberculosis campaign in the province. The sub-committee decided that a tuberculosis campaign should be undertaken in the province by intensive propaganda by means of pamphlets, lectures, magic lantern demonstrations and cinema films and that pamphlets in English, Urdu, Hindi, Oriya and Bengalee stating fully the causes of tuberculosis and the main lines of prevention should be distributed through the agency of school children, local bodies, and social volunteers. The sub-committee are ready to give professional advice. The provincial district boards and municipalities have been requested to organize a campaign and check the spread of the disease in the province.

CHAPTER XII.—Public Health Administration.

1. The statement below shows the receipts and expenditure under the head 33—Public Health (Medical) for the years 1930-31 and 1931-32 :—

Receipts.			Heads of expenditure.	1930-31.		1931-32.	
Heads.	1930-31.	1931-32.		Budget provision.	Expenditure.	Budget provision.	Expenditure.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
Sale proceeds of sera and vaccine, etc.	25,231	30,821	Public Health Establishment.	2,50,653	2,27,381	2,25,812	2,04,009
			Medical examination of scholars and teaching of hygiene in high schools.	40,970	39,684	42,543	38,744
			Bubonic plague ...	5,000	8,088	5,000	6,667
			Malaria ...	20,500	13,086	20,500	13,986
			Other epidemic diseases	95,400	84,157	1,08,164	84,063
			Publicity Campaign ...	2,206	1,987	2,266	1,823
			Public Health Laboratory	16,132	13,197	15,080	12,669
			Angul ...	4,460	3,520	4,460	2,346
			Total ...	4,35,321	3,91,100	4,23,825	3,54,307

Practically all the demands of the Director of Public Health were administratively approved by the Government and funds in most cases were allotted inspite of the present financial stringency.

2. There were four Assistant Directors of Public Health. The post of one of them was abolished in October 1932 and the circles of these officers were redistributed. The districts of Patna, Gaya, Shahabad, Hazaribagh, Palamau, portion of the Monghyr district, south of the Ganges and portion of the Bhagalpur district, south of the Ganges with headquarters at Patna were distributed to the Assistant Director of Public Health of the South Bihar Circle. The districts of Champaran, Muzaffarpur, Saran, Darbhanga, Purnea, Santal Parganas, portion of the Monghyr district, north of the Ganges and portion of the Bhagalpur district, north of the Ganges with headquarters at Muzaffarpur to the Assistant Director of Public Health, North Bihar Circle. The districts of Ranchi, Manbhum, Singhbhum, Cuttack, Puri, Balasore, Sambalpur and Angul with headquarters at Ranchi were distributed to the Assistant Director of Public Health, Chota Nagpur and Orissa Circle.

The three Assistant Directors of Public Health are employed to investigate into the epidemics, suggest measures of control and to see that the actions taken are adequate to combat the epidemic. They also supervise the permanent prophylactic measures, for example vaccination, cholera inoculation, etc. They inspect and report on all nuisances occurring in their areas and a systematic inspection of all district boards, municipalities, union boards and high schools, also the fairs and melas are included in their legitimate duties. They also do propaganda work by lectures and magic lantern demonstrations. Their supervision and expert advice have done much to assist the local bodies towards improvement of all sanitary matters that may prejudice the health of the people for example, drains, water-supply, disposal of refuse and excreta, etc.

3. There are five School Medical Officers of the Assistant Surgeon grade and five Assistant School Medical Officers of the sub-assistant surgeon class for the five divisions of the province and one Lady School Medical Officer for girls' schools throughout the province. These officers inspect the scholars of all High Schools and most of the Middle English Schools of their respective divisions and record their findings in certain standardized forms. It was proposed to transfer the control and supervision of the work to the Assistant Directors of Public Health from the Inspectors of Schools under whom they were working hitherto, and suggestions were made to improve the efficiency of school medical inspection. The proposal was given effect to in the beginning of the year 1933.

4. Government maintains a permanent staff of Assistant Surgeons, who are available, and are detailed on demand from any district to deal with communicable diseases like cholera, small-pox, plague, malaria, tuberculosis, epidemic dropsy, etc. Sub-Assistant Surgeons as many as required are also employed to still further assist local bodies in times of stress. Epidemic vaccinators, to the extent of one hundred or more, are also detailed to the various districts; these men are trained in and undertake disinfection work also.

5. There is a Medical Officer of the Assistant Surgeon grade who is in charge of the Public Health Bureau attached to the office of the Director of Public Health. He writes articles on Public Health subjects for publication in the local press. Pamphlets and posters are distributed to local bodies. He delivers lectures on hygiene to the Police probationers and constables and at melas and fairs with the aid of magic lantern slides. He is also the Health Officer of the Patna Administration Committee and Personal Assistant to the Director of Public Health.

6. Five Medical Officers of the Assistant Surgeon grade of the Government Public Health cadre have been lent to the district boards of Muzaffarpur, Saran, Champaran, Gaya and Bhagalpur to work as health officers of the district boards.

Three Medical Officers of the Assistant Surgeon grade have also been lent to the municipalities of Patna City, Gaya and Puri as Health Officers.

7. A medical officer of the assistant surgeon grade works as Chemical Analyst of the Public Health Laboratory where analyses of water and food stuffs are carried out.

8. A medical officer of the assistant surgeon grade works as Superintendent of the Vaccine Depot at Namkum. Vaccine lymph is manufactured and distributed throughout the province from this Depot.

CHAPTER XIII.—Vaccination.

The annual vaccination report is submitted as an annexure to this report.

CHAPTER XIV.—Other Public Health Services.

1. Jharia Mines Board of Health—

The sanitary control of the Jharia and adjoining coal mining areas vests in the Jharia Mines Board of Health which now control the whole area of the Dhanbad subdivision (except Dhanbad municipality), the population of which is 504,736. The estimated population for 1932 is 511,085.

Epidemic diseases—

A tabulated statement (Appendix III) is attached which shows the incidence of epidemic diseases during the year. Cholera, small-pox and influenza accounted for a total of 35 deaths amongst the colliery population of about 126,000.

Of the 980 deaths, 11 occurred in 51 cases of cholera which shows a mortality of 21.5 per cent and the death rate of 0.09 per 1,000 as compared with the provincial ratio 0.2. In the whole area there were 32 deaths from cholera and 19 from small-pox, in a total population of 504,736 which gives mortality ratios of 0.06 for cholera and 0.03 for small-pox.

Water-supplies—

During the year five collieries were connected to the Jharia water board mains, bringing the total number of connected collieries to 168.

As a precautionary measure against cholera the Board reserved temporarily 13 tanks.

Sanitation—

The buffalo conservancy carts previously in use in Jharia have been replaced by two motor lorries. The Board has also purchased two trailers for use with the lorries. At Katras, Kirkend and Chirkunda the buffalo carts are still in use.

A co-operative and purely voluntary scheme has been in operation since 1926 whereby the residents of certain kulhis of Jharia, on payment of Re. 1 per mensem, have their latrines attended to. A committee is chosen by the subscribers of which the Chief Medical Officer of the Board is President. Year by year, the area of operation is extended as circumstances dictate. Owing to the extension of the work during 1932 it was found necessary to increase the staff to 2 jamadars and 11 sweepers, and also to double the capacity of the septic tank.

Maternity and Child Welfare—

The Maternity Supervisor had to be discharged, as a retrenchment measure and was replaced by two lady health visitors. The Board also employed a staff of 5 midwives besides 2 lady health visitors for attending labour cases and every encouragement was given to the indigenous dais to undergo training under the supervision of midwives. Ante-natal and post-natal cases of mothers and supervision of the health of the children also formed part of the duties of the midwives and health visitors.

The following maternity and child welfare centres functioned during the year and a fresh centre was opened for Sijua area :—

- (a) Kustara,
- (b) Kusoonda-Nayadee,
- (c) Central Kerkend.

Leprosy—

A leprosy survey of some of the collieries and villages near Jharia was carried out under the direction of Dr. E. Muir and it was estimated that 3 to 4 per cent of the population were lepers and that the disease was spreading. The Board allotted Rs. 1,600 for leprosy work and a leprosy clinic at Jharia was opened on the 1st April, 1932, which was largely attended. This was followed by the opening of two more clinics, one at Kanta Pahari near Katras from 1st September and the other in the Dhanbad municipal area from the same date. The leprosy staff consisted of one doctor, and three dressers. Altogether 115 clinics were held, 963 new cases and 8,930 old cases were attended to at these clinics.

The mining settlements were visited by the Director of Public Health and the Assistant Director of Public Health during the year, and close touch has always been maintained by the Public Health Department with the sanitary administration of the coalfield.

The Jharia Mines Board of Health and their Chief Medical officer and staff are to be congratulated on the satisfactory results of the year's work and on the steady progress achieved.

2. Public Health Laboratory—

During the year, 1,457 articles were examined chemically and bacteriologically as opposed to 1,201 articles of the previous year.

One thousand and fifty-eight samples of water were examined bacteriologically of which 426 samples were also examined chemically. The following shows the sources and the number of samples :—

Waterworks	...	...	...	...	...	805
Jails	...	...	...	...	...	167
Other sources	...	...	...	...	...	86

Foodstuffs.—The total number of samples examined was 353 as opposed to 388 of the previous year. The samples of foodstuffs were received from 19 districts of the province. No samples were received from the districts of Angul and Palamau.

Ghee.—Two hundred and twelve samples of ghee were examined out of which 121 or 57·07 per cent were found below the standard or adulterated against 41·85 per cent of the previous year. (Of these 121 samples, 40 samples sent from Puri as ghee were found on analysis, to be vegetable oils.) Twenty-three samples were found to be of doubtful purity.

Mustard oil.—Ninety-six samples of mustard oil were examined out of which 49 or 51·04 per cent were found adulterated or below the standard against 37·28 per cent of the previous year. Fifteen samples were found to be of doubtful purity.

Sweets.—Twenty samples of sweets (*Methai*, *Kachauri*, *Puri*, etc.) were examined with a view to find out if they were made of pure ghee or mustard oil. Out of 20, 15 samples or 75 per cent were found to have been made of ghee or oil which was below the standard against 66·66 per cent of the previous year.

Milk.—Fourteen samples of milk were examined out of which three samples or 27·27 per cent were found to contain added water.

Atta.—Seven samples of *atta* (wheat flour) were examined all of which were found genuine. The percentage of gluten varied from 6·3 to 10·45 per cent.

Miscellaneous.—One sample of groundnut oil, one sample of butter, one sample of barley and one sample of gur were examined for their purity. Ten samples of Electrolytic Chlorogen were examined for determination of available chlorine. Twelve samples of Ether (from the Medical College Hospital) were examined to see if they satisfied the B. P. standard—all of them were found not up to the standard. Four samples of Almino-Ferric

were examined for their Also 3 contents. Three samples of castor oil were examined to see if they are up to the B. P. standard. One sample of perchloron and two samples of Spirit Rectificatus were analysed to test their purity.

One sample of Tartar Emetic sent by the Veterinary Department was analysed to find out any impurity present in it, as it caused the death of several cattle after intravenous injection. It was an impure sample containing a lot of silicates like powdered talc.

Medicines.—Eight samples of stock mixture from the Medical College Hospital were analysed to see if they were made up according to the doses prescribed in the hospital pharmacopœia. All of them were found to have been correctly dispensed.

CHAPTER XV.—General Remarks.

I. Research Work—Bacteriophage Experiments—

In view of the encouraging results obtained in field experiments during the past years, bacteriophage was again used this year as the only method of prevention and treatment of cholera in the two districts of North Bihar, namely Purnea and Muzaffarpur. The phage was administered under the general control of Dr. I. N. Asheshov through the agency of the public health staff of the districts concerned. The Assistant Director of Public Health, North Bihar Circle, supervised the arrangements and checked the statistics supplied by the health officers. No disinfectant was used and no cholera inoculation was given in these two districts.

After a severe epidemic of cholera in 1930, it was difficult to prove that the results of 1931 were entirely due to the use of bacteriophage. In spite of the fact that we had to deal again with a mild cholera year, the results of the experiment of 1932 are very important in so far as they repeat and re-affirm the good results obtained previously. Greater care was taken during this year to arrive at definite conclusions with regard to the value of cholera bacteriophage as a curative and preventive of cholera.

A special form was used for recording the history of individual cases and outbreaks. The health officers of the districts reported the details which were verified by the Assistant Director of Public Health, North Bihar Circle.

The following table illustrates the use of bacteriophage as a curative measure :—

Districts.	Years.	Total number of cases.	Total number of deaths.	Percentage of death.	Total number treated with bacteriophage.	Total number of deaths in bacteriophage treated cases.	Percentage of death in bacteriophage treated cases.	Total number of cases not treated with bacteriophage.	Total number of deaths in cases not treated with bacteriophage.	Percentage of death in cases not treated with bacteriophage.
1	2	3	4	5	6	7	8	9	10	11
Muzaffarpur	1931...	981	256	26.1	729	63	8.6	252	193	76.5
	1932...	991	187	18.8	791	49	6.1	200	138	69.0
Purnea	1931...	698	424	60.7	250	53	21.2	407	349	85.7
	1932...	348	184	52.8	201	60	29.8	147	124	84.3

It will be seen from the above table that in Muzaffarpur district 74.3 per cent of cases of cholera were treated with phage in 1931 and 79.8 per cent in 1932. The total mortality for treated and untreated cases in 1931 was 26.1 per cent but whereas mortality in treated cases was only 8.6 per cent, there was 76.5 per cent of deaths in untreated cases. Similarly in 1932, the total mortality for treated and untreated cases was 18 per cent. The mortality amongst treated cases was 6.1 per cent and amongst untreated cases was 69 per cent.

In the district of Purnea only 31·8 per cent of the total number of cases of cholera was treated with bacteriophage in 1931. The total mortality from cholera was 60·8 per cent but the death rate amongst those treated with bacteriophage was 21·2. The death rate amongst the untreated cases was as high as 78·0. Similarly in 1932 only 57·7 per cent of the total number of cases was treated with bacteriophage. The total mortality from cholera during this year was 58·2, but whereas the mortality amongst treated cases was 29·8 per cent, in the untreated cases it was as high as 84·3 per cent.

The success of the experiment depends on the quickness with which the information of an attack reaches the health staff of the district in order to be able to administer the phage sufficiently early and the correct statistical data by which we can judge the result of the experiment. In Muzaffarpur, the health officer took a very keen interest in the experiment and collected information regarding the occurrence of cases through his own staff independently of the police reports, and thus was able to give phage to about 80 per cent of the cases in proper time. The total cholera mortality recorded in Muzaffarpur was 18·8 per cent. In Purnea a large number of patients got bacteriophage later and 43·2 per cent of the cases did not get it at all. In this district only 57·7 per cent of the cases have been timely attended to and the cholera mortality rate of 52·8 per cent has been recorded. Parts of the Purnea district are more inaccessible, specially during the rains, than the Muzaffarpur district and this probably accounts for the fewer cases treated with and the late administration of the bacteriophage.

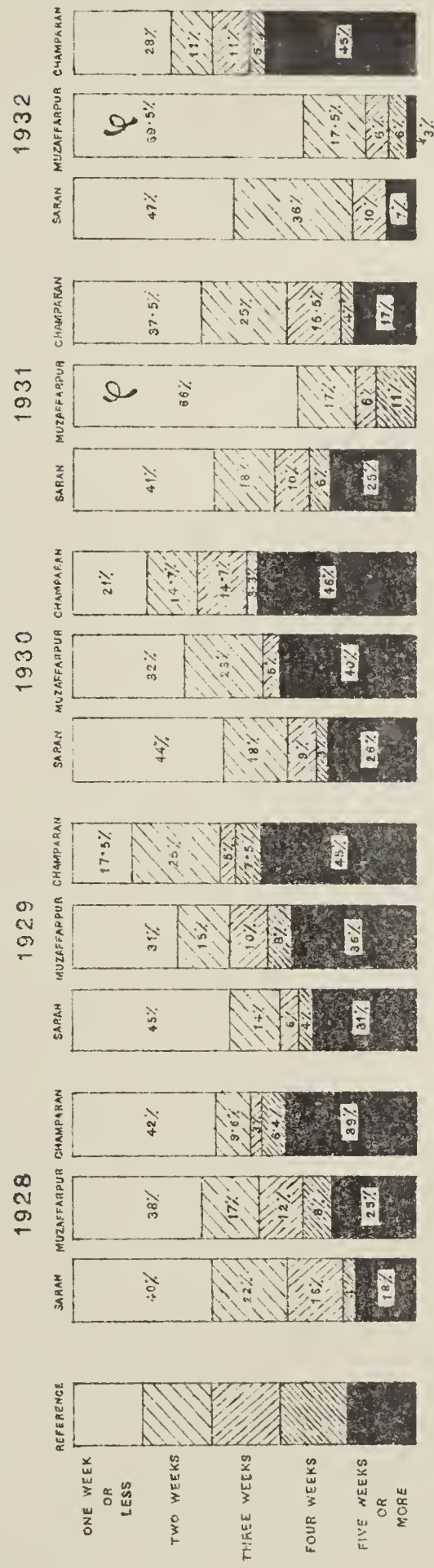
Improved health organizations and timely administration of the phage should still improve the mortality rate. It was practically impossible to reach some of the places of outbreaks in time to be able to treat the cholera cases sufficiently early. In compiling the figures only the cases treated within 48 hours of the onset of the disease have been considered. The cases treated after 48 hours have been excluded, as in the latter group recovery can be attributed not to phage alone but to natural causes as well.

As regards the preventive value of bacteriophage it had the effect of cutting down the duration of an outbreak and the total deaths in each outbreak to a very marked extent. In the Muzaffarpur district for instance the average duration of an outbreak in a village was 2·8 days in 1931 and 1·9 days in 1932 as compared with 6 days in Champaran in 1931 and 5·6 days in 1932; 5·3 days in the Saran district in 1931 and 4·8 days in 1932, as illustrated in the above graph. Although the adjoining and comparable districts of Saran, Champaran and Muzaffarpur presented a similar record in every respect before the use of bacteriophage, the Muzaffarpur district presented an entirely different picture in 1931 and 1932 as a result of the use of the phage by showing a considerable reduction in the duration of the epidemics which were mostly aborted. Having regard to the fact that the intensity and virulence of cholera differ from year to year, the value of bacteriophage can be proved definitely only by continued and prolonged use extending over several years, i.e., until the occurrence of a severe epidemic when the value of bacteriophage can be finally demonstrated. The results obtained so far tend to prove that besides being cheap and easy of administration, bacteriophage is better for the prevention and treatment of cholera than the usual methods. The use of bacteriophage has accordingly been extended to Patna and Gaya districts in addition to Muzaffarpur and Purnea in 1933.

2. Prevention of Blindness—

At the instance of the Hon'ble Minister, Local Self-Government, the propaganda work in connection with the prevention of blindness was undertaken in the Aurangabad subdivision of Gaya district. Dr. Gobind Prasad, an officer of the department, was deputed for the purpose. He with the assistance of two epidemic vaccinators carried out the propaganda work for a period of about three months starting from the month of May 1932. He visited 92 villages, examined 506 eye cases, treated those with minor ailments and recommended others to go to the nearest dispensary. He also delivered lectures and gave 18 magic lantern demonstrations to the people on the common causes

RELATIVE LENGTH OF CHOLERA OUTBREAKS IN THREE ADJOINING DISTRICTS OF NORTHERN BIHAR TAKEN BY THANAS (POLICE STATIONS)



LONGEST DURATION	14	27	21	21	21	22	17	21	30	14	4	11	5	11
NUMBER OF CASES	2138	8266	6945	10059	7854	7603	5150	35470	16917	2336	315	891	111	759
NUMBER OF OUTBREAKS	93	97	62	99	77	40	83	51	61	39	47	24	19	18
AVERAGE NUMBER OF CASES IN ONE OUTBREAK	23	85	112	100	102	190	62	590	277	59	6.6	37	5.3	42.1

of blindness and how they can be prevented. The propaganda work also included distribution of leaflets containing simple instructions on the prevention of blindness.

A further investigation into the causes of blindness was decided to be undertaken in Patna City Municipality and Gaya district during 1933.

3. Studies in the technique of small-pox vaccinations—

Experiments on anti small-pox vaccinations were continued during the year in the Ranchi town and in the surrounding rural areas by Dr. C. N. Bannerji, Superintendent, Vaccine Depot, Namkum.

The experiment carried out so far, showed that in dilutions of 1 in 1,000 of the lymph, the results were a failure both in infants and in rabbits. In infants only 15 per cent showed a modified take and all these cases subsequently took well, when vaccinated with 1 in 5 dilutions. In rabbits dilutions of 1 in 1,000 took fairly successfully but subsequent re-vaccinations with 1 in 5 dilution also took, showing that practically no immunity was conferred by vaccination with 1 in 1,000 dilutions.

It is not easy in a country like this to get children to submit to repeated vaccinations nor are the parents of the children under any control.

It has been suggested that the experiment should be repeated with a 1 in 100 dilution and if this proves satisfactory, higher dilutions should be tried. It is also proposed that some experiment should be carried on with a 1 in 5 dilution with a varying number and size of scarifications.

4. Personal proceedings and office—

The office of the Director of Public Health was held by Lt.-Col. J. A. S. Phillips, I.M.S., throughout the year.

Of the Assistant Directors of Public Health, Dr. R. M. Prasad was in charge of the South Bihar Circle from the 1st January to 31st March and Major S. L. Mitra, I.M.S., from the 1st April to the end of the year.

Dr. A. N. Chatterji was in charge of the North Bihar Circle from the 1st January to 30th September and Dr. J. L. Das from the 1st October to the end of the year. Dr. B. P. Mazumdar was in charge of the Chota Nagpur Circle throughout the year except from 10th March to 28th April, during which period the Assistant Director of Public Health, South Bihar Circle, was in additional charge.

Dr. J. L. Das was in charge of the Orissa Circle from the 1st January to the 20th September and from the 21st September Dr. B. P. Mazumdar took charge of this circle which has been amalgamated with the Chota Nagpur Circle.

5. Touring—

During the year, the Director of Public Health remained on tour for 69 days as compared with 65 days in the previous year, and the Assistant Directors of Public Health of the North Bihar, South Bihar and Chota Nagpur and Orissa Circles for 162, 67 and 142 days, respectively, as compared with 157, 112 and 134 days in the previous year.

6. Personnel—

Dr. B. P. Mazumdar, Assistant Director of Public Health, Chota Nagpur Circle, performed his duties very satisfactorily. He held charge of the Vaccine Depot at Namkum and was responsible for the prompt despatch of all vaccines to Civil Surgeons and Chairmen of local bodies.

Rai Bahadur Dr. J. L. Das, Assistant Director of Public Health, Orissa Circle, also performed his duties satisfactorily. He was largely responsible for the successful arrangements made at Puri for the car festival.

The work of Dr. A. N. Chatterji was particularly satisfactory in connection with the experiments with bacteriophage in two districts of Muzaffarpur and Purnea which were carried out under his supervision. The accuracy of the statistics for the report on the experiment was largely due to his efforts.

The work of Rai Sahib Dr. B. Naik and Dr. B. C. Roy, health officers of Puri municipality and Muzaffarpur district board, respectively, were also very satisfactory.

S. L. MITRA, MAJOR, I.M.S.,
Offg. *Director of Public Health, Bihar and Orissa.*

Annual Vaccination Report of the Province of Bihar and Orissa for the year 1932-33.

1. The statistics in the two reports are for different periods, those in the Annual Public Health Report being for the calendar year, whereas those in the Vaccination Report are for the financial year, in order that the figures for the complete vaccination season of October to March may be included in it.

2. *Staff*.—Lt. Col. J. A. S. Phillips, I.M.S., held charge of the department up to 9th February 1933, and Major S. L. Mitra, I.M.S., from the 10th February 1933 to the end of the year.

The undermentioned officers held charge of the four circles for periods as noted against their names :—

(1) *South Bihar Circle*.—Major S. L. Mitra, I.M.S., from 1st April 1932 to 9th February 1933, and Dr. A. N. Chatterji from 10th February to 31st March 1933.

(2) *North Bihar Circle*.—Dr. A. N. Chatterji from 1st April to 30th September 1932, and Dr. J. L. Das from 1st October 1932 to 31st March 1933.

(3) *Chota Nagpur Circle*.—Major S. L. Mitra, I.M.S., held additional charge of the circle from 1st April to 28th April 1932 and Dr. B. P. Mazumdar from 29th April 1932 to 31st March 1933.

Dr. B. P. Mazumdar held charge of the Vaccine Depot at Namkum throughout the year except for the period from 1st to 28th April 1932.

(4) *Orissa Circle*.—Dr. J. L. Das was in charge of the circle from 1st April to 20th September 1932 when this circle was abolished and amalgamated with the Chota Nagpur Circle.

The inspecting staff consisted of 20 District Inspectors of Vaccination and 64 Sub-Inspectors of Vaccination (including three deputed for duty at the Vaccine Depot). The total number of vaccinators employed in the province during the year was 1,165 licensed and 275 paid, against 1,095 licensed and 269 paid in the previous year.

In municipalities and in the district of Puri, vaccination was done by paid vaccinators; but otherwise the work throughout the province was carried out under the licensed system, except for the employment of paid vaccinators by district boards, and employed temporarily by Civil Surgeons for short periods to deal with outbreaks of small-pox.

3. *Operations performed*.—The total number of operations performed during the year amounted to 1,548,636 as compared with 1,206,628 last year.

This shows an increase of 342,008 in the number of operations as compared with the figure for 1931-32.

Vaccination is not yet a popular measure with the masses in the province. When small-pox is prevalent, the people show some degree of willingness to have their children protected, and in 1926 and 1927 when the disease raged in epidemic form, a greater number of vaccinations was recorded. In 1929 there were fewer cases of small-pox in comparison with 1928, so that there was not therefore the same incentive. In 1932, however, there has been an increase of 342,008 over the figure for 1931. This was probably due to the slight increase in the number of cases of small-pox that occurred in 1932.

Of the total number of operations performed 1,509,584 were done by the staff of Vaccination Department as compared with 1,178,859 done last year. 1,100,409 operations were primary and 409,175 were revaccinations against 1,058,096 primary operations and 120,763 revaccinations done last year.

There was an increase of 42,313 in the number of primary operations and 288,412 in the number of revaccinations during the year. Of the total operations performed (1,509,584), 1,273,660 equal to 84·37 per cent were successful as compared with 1,107,295 equal to 93·93 last year.

The number of operations performed in municipalities increased by 88,540 as compared with last year's returns. The total number of operations performed was 140,980 and the number of successful operations was 87,853 of which 42,096 were primary and 45,757 were revaccinations, as compared with 34,420 and 6,216, respectively, last year. The ratios of success in municipalities were 96·68 per cent for primary operations and 46·96 per cent for revaccination as compared with 97·78 per cent and 36·06 per cent, respectively, last year.

The number of operations performed in rural areas was 1,407,656 as compared with 1,126,419 last year and the ratios of success were 99·40 per cent for primary operations and 43·40 for revaccinations.

4. *Vaccination in districts.*—The districts of Patna, Gaya and Shahabad reported increases of 43,761 and 54,485 and 12,356, respectively, in the number of operations performed. Vaccination in the rural areas of the districts of Patna and Gaya is now controlled by the health officers of the district boards.

The districts of Muzaffarpur, Champaran, Darbhanga and Saran recorded increases of 34,270, 38,814, 34,006 and 24,456, respectively. Vaccination in the rural areas of the districts of Champaran, Muzaffarpur and Darbhanga is now controlled by the health officers of district boards.

The districts of Bhagalpur, Monghyr and Purnea recorded increases of 15,543, 23,556 and 13,475, respectively. The Santal Parganas recorded a decrease of 729. Vaccination in the rural areas of the districts of Bhagalpur and Purnea is now controlled by the health officers of the district boards.

The districts of Cuttack, Angul and Sambalpur recorded decreases of 6,213, 1,556 and 4,992, respectively. The districts of Balasore and Puri recorded increases of 13,586 and 7,273, respectively.

The districts of Hazaribagh, Ranchi and Manbhum recorded increases of 3,049, 39,937 and 2,193, respectively, whereas Palamau and Singhbhum recorded decreases of 2,407 and 2,856, respectively.

5. *Vaccination in towns and compulsory areas.*—Statement VI shows that during the year, 16,843 children under one year of age, out of an available number of 27,221 or 61·87 per cent were successfully vaccinated.

The towns of Muzaffarpur, Hajipur, Bihar, Khagole, Dumraon, Forbesganj, Sambalpur, Jamalpur and Dhanbad show the smallest proportion of work done.

6. *Work done in the Native States under the supervision of the Political Agent and Commissioner.*—Vaccination work in the Orissa States has steadily developed during the recent years under the direction and encouragement of the Political Agent and Commissioner.

Both vaccinations and, to a large extent, revaccinations are practically compulsory in the majority of these States.

During the year under report 34,715 primary operations and 88,475 revaccinations were performed as compared with 208,006 and 305,619, respectively, in the previous year. The progress made in vaccination in these States has been steady and it is hoped that this will be maintained.

7. *Protection of infants.*—During the year under report, the number of children under one year available for vaccination was 1,158,450 and the number of successful operations was 281,060 equal to 243 per thousand against 366,706 or 345 per thousand successful operations out of 1,062,331 children

available during the previous year. The protection of infants in municipalities is separately shown in statement VI. It gives a ratio of 619 per thousand of the surviving infant population as compared with 622 in the previous year.

These figures are unsatisfactory, inasmuch as they show that far more than half of the total number of operations is performed on children over one year of age. Civil Surgeons and Assistant Directors of Public Health are unanimous in attributing the opposition to vaccination to be concerned more with the age of the child than with the operation itself, as there is a strong prejudice against vaccination of infants at an early age. The advantages in retaining the limit of age for compulsory primary vaccination as it now stands are obvious, but prejudices in India die hard and it will take years of education to dispel this one.

8. *Incidents and mortality of small-pox.*—During the last ten years the total number of deaths from small-pox in the districts of this province has been 155,851.

During the first quinquennium the number of deaths was 97,456 and during the second, 58,396. In each of last five years the mortality was as follows:—

10,775, 6,648, 8,137, 8,539 and 24,297.

The provincial ratios of the mortality from small-pox over thousand of population during the last five years have been 0·31, 0·19, 0·24, 0·23 and 0·64.

In the Annual Vaccination Report for 1926-27, it was stated that small-pox which had been raging in epidemic form was showing signs of subsiding. There was a considerable decrease in the incidence of the disease in 1927-28; in 1928-29, there was a further reduction, and in 1929-30, there has been a still further reduction in the number of cases; in 1930-31, there has been a small increase over the figure of 1929-30; in 1931-32, there has been a slight increase over the figure of 1930-31 and in 1932-33, there has been a great increase over the figure of 1931-32.

9. *Prevention of small-pox.*—The statistics given in previous paragraphs showing the number of operations performed during the year are not satisfactory, and indicate the insufficiency and inefficiency of the existing arrangements for vaccination in the province. The agency exists but its efforts are defeated for the most part by the attitude of the people towards this simple and efficient method of protection.

Small-pox is a preventable disease, and vaccination can prevent it, and in the light of this knowledge, and in the face of the unsatisfactory vaccination state of the people there is a great necessity for a more vigorous and complete vaccination policy. The question of compulsory vaccination and the best method of carrying it out received careful consideration.

During the year, the responsibility for vaccination in rural areas vested with the district boards of Gaya, Muzaffarpur, Champaran, Darbhanga, Bhagalpur and Purnea, in addition to Patna where it had been introduced in the year 1929.

In the Patna vaccination scheme, as reported in the previous year, vaccination when performed at a depôt is free but a fee of annas 4 is charged for every operation done in private dwellings or in villages. Vaccinators are paid one anna per operation done in the depôt and receive a percentage of the fees collected for operations done outside the depôt.

In the Muzaffarpur scheme, however, vaccinations are performed, as at Patna, free at depôts, but a fee of annas four is levied by the licensed vaccinators for every operation done outside these depôts. The whole of this fee is taken by the vaccinators and no complicated accounting is necessary as with the Patna scheme. This scheme has proved suitable and easier and has been adopted in the other districts mentioned above. Both these schemes are more or less self-supporting.

The question of the extension of the Bengal Vaccination Act to the rural areas of Saran, Shahabad and Puri districts was under consideration during the close of the year and it is hoped that the Act will be extended to these districts during the next year.

10. *Inspection of work.*—During the year under report the Assistant Directors of Public Health inspected 86,761 primary vaccinations as against 76,378 in the previous year.

The inspecting work done by the Assistant Directors of Public Health has been comprehensive and they have submitted valuable reports on the efficiency of the staff and work in the 21 districts in the province.

The Superintendents of Vaccination of the province inspected 49,280 primary and 5,512 revaccination operations against 36,228 primary and 5,942 revaccinations last year.

11. *Supply of vaccine.*—The Vaccine Depot at Namkum supplied the province with vaccine throughout the year. A large supply of vaccine is held in reserve and an ample stock of the necessary stores and supplies for manufacture is maintained; 4,819,031 doses of vaccine were manufactured during the year as compared with 1,810,625 doses last year. The number of doses issued was 3,088,742 against 2,827,559 in 1931-32. The number of doses in stock at the end of the year was 4,806,248. The number of cattle used during the year was 1,360 as compared with 497 in the previous year, and the average yield of crude vaccine was over 36 grammes per animal. The working cost of the depot for the year amounted to Rs. 29,374 as compared with Rs. 26,209 in the previous year. The average cost of the vaccine per dose works out at 1.17 pies on the gross expenditure, and the sale proceeds of vaccine lymph was Rs. 27,073.

12. *Vaccine Depot and cold storage.*—During the year under report, no serious epidemic diseases broke out amongst calves. A few calves had a mild attack of foot and mouth disease but this was readily controlled.

The total mortality amongst calves was 0.5 per cent.

The cold storage worked satisfactorily. The Index thermometer attached to the old cold chamber was detected to be out of order after the completion of the repairs to the chamber. The insulation of the old cold chamber was removed partially and cracks in the floor and roof were also repaired.

Throughout the year, cholera and influenza vaccines were stocked in the depot and issued throughout the province as required.

13. *Experimental work.*—All seed vaccine was manufactured at the depot and worked satisfactorily. 12787.35 grammes of seed vaccine were prepared.

The rejuvenation of the seed vaccine was maintained by passage through rabbits, buffalo-calves and cow-calves.

14. *Cost of the Department.*—The total cost of the Vaccination Department (excluding the Vaccine Depot) during the year, as detailed in statement II, was Rs. 1,55,120 or Rs. 5,502 less than the previous year.

The cost per successful operation was two annas and one pie against two annas and three pies in the previous year.

15. *Personnel.*—In conclusion, I desire to bring to the notice of Government the good work done by the Assistant Directors of Public Health in connection with the inspection of vaccination in their respective circles.

Dr. B. P. Mazumdar was in supervising and controlling charge of the Vaccine Depot in addition to his own duties and showed great keenness and interest in all matters connected with the depot.

Dr. C. N. Banerji, the Superintendent of the depot, performed his duties in a satisfactory manner.

S. L. MITRA,

MAJOR, I.M.S.,

Offg. Director of Public Health, Bihar and Orissa.

APPENDIX I.

1	2	3			4		
No.	Districts.	Population according to the Census of 1931.			Number of Births registered.		
		Male.	Female.	Total.	Male.	Female.	Total.
PATNA DIVISION.							
1	Patna	956,124	890,350	1,846,474	33,377	32,109	65,486
2	Gaya	1,193,643	1,194,819	2,388,462	53,999	52,092	106,091
3	Shahabad	999,099	994,390	1,993,489	38,573	36,080	74,653
	Total ...	3,148,866	3,079,559	6,228,425	125,949	120,281	246,230
TIRHUT DIVISION.							
4	Saran	1,220,049	1,266,419	2,486,468	45,556	43,487	89,043
5	Champaran	1,080,956	1,064,731	2,145,687	34,056	33,046	67,102
6	Muzaffarpur	1,443,847	1,497,178	2,941,025	51,127	48,643	99,775
7	Darbhanga	1,570,959	1,595,135	3,166,094	48,860	45,958	94,818
	Total ...	5,315,811	5,423,463	10,739,274	179,599	171,139	350,738
BHAGALPUR DIVISION.							
8	Monghyr	1,145,797	1,141,357	2,287,154	41,997	39,479	81,476
9	Bhagalpur	1,130,584	1,104,048	2,234,632	34,109	32,982	67,091
10	Purnea	1,129,681	1,056,862	2,186,543	30,170	27,633	57,803
11	Santal Parganas	1,025,921	1,025,551	2,051,472	29,557	28,672	58,229
	Total ...	4,431,983	4,327,818	8,759,801	135,833	128,766	264,599
ORISSA DIVISION.							
12	Cuttack	1,028,134	1,148,573	2,176,707	41,782	39,554	81,336
13	Balasore	480,518	510,082	990,600	14,832	14,387	29,219
14	Angul	108,925	113,811	222,736	4,760	4,569	9,329
15	Puri	500,214	534,940	1,035,154	19,255	17,899	37,154
16	Sambalpur	431,460	449,485	880,945	15,663	14,502	30,165
	Total ...	2,549,251	2,756,891	5,306,142	96,292	90,911	187,203
CHOTA NAGPUR DIVISION.							
17	Hazaribagh	751,956	765,401	1,517,357	29,612	28,735	58,347
18	Ranchi	777,063	790,086	1,567,149	25,660	25,944	51,604
19	Palamanu	409,778	408,958	818,736	17,970	17,556	35,526
20	Manbhum	940,009	870,881	1,810,890	27,729	26,859	54,588
21	Singhbhum	469,421	460,381	929,802	12,116	11,345	23,461
	Total ...	3,348,227	3,295,707	6,643,934	113,087	110,439	223,526
	Total for the Province ...	18,794,138	18,883,438	37,677,576	650,760	621,536	1,272,296

DIX I.
districts of Bihar and Orissa Province, during the year 1932.

5			6	7	8	9			10
Ratio of births per 1,000 of population.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	Mean ratio of births per 1,000 during previous five years.			No.
Male.	Female.	Total.				Male.	Female.	Total.	
18.1	17.4	35.5	104	14.9	...	16.9	16.3	33.2	1
22.6	21.8	44.4	103	21.6	...	20.7	20.2	40.9	2
19.3	18.1	37.4	107	14.8	...	18.6	17.6	36.2	3
20.2	19.3	39.5	105	17.4	...	18.9	18.2	37.1	
18.3	17.5	35.8	104	14.6	...	17.8	17.2	35.0	4
15.9	15.4	31.3	103	11.5	...	16.8	16.3	33.1	5
17.4	16.5	33.9	105	12.4	...	17.2	16.7	33.9	6
15.4	14.5	29.9	106	10.5	...	16.2	15.7	31.9	7
16.7	15.9	32.6	105	12.1	...	17.0	16.4	33.4	
18.4	17.2	35.6	106	16.7	...	18.6	18.1	36.7	8
15.3	14.7	30.0	103	11.3	...	15.8	15.0	30.8	9
13.8	12.6	26.4	109	6.8	...	13.9	13.2	27.1	10
14.4	13.0	27.4	103	11.3	...	13.7	13.4	22.2	11
15.5	14.7	30.2	105	11.8	...	15.6	15.0	30.6	
19.2	18.2	37.4	105	11.7	...	18.1	17.0	35.1	12
15.0	14.5	29.5	92	2.5	...	17.1	16.0	33.1	13
21.4	20.5	41.9	104	19.4	...	21.5	20.9	42.4	14
18.6	17.3	35.9	107	10.5	...	18.4	17.5	35.9	15
17.8	16.4	34.2	108	10.2	...	18.6	17.8	36.4	16
18.1	17.1	35.2	106	9.7	...	18.2	17.2	35.4	
19.5	18.9	38.4	103	20.7	...	18.7	18.3	37.0	17
16.4	16.5	32.9	78	11.4	...	17.0	16.6	33.6	18
21.9	21.4	43.4	102	17.4	...	20.8	20.5	41.3	19
15.4	14.8	30.2	103	14.5	...	13.7	12.9	26.6	20
13.0	12.2	25.2	107	12.4	...	12.5	12.1	24.6	21
17.0	16.6	33.6	102	15.2	...	16.3	15.8	32.1	
17.3	16.5	33.8	105	13.2	...	17.0	16.4	33.4	

Annual Form No. II.—Statement of Births and Deaths registered

1	2	3	4	5			6		7				
No.	District.	Area in square miles.	Average population per square mile.	Population (Census, 1931).			Births.		Number of deaths registered.				
				Male.	Female.	Total.	Total number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.		
PATNA DIVISION.													
1	Patna	2,068	893	956,124	890,350	1,846,474	65,486	35·5	19,413	18,564	37,977		
2	Gaya	4,714	506	1,193,643	1,194,819	2,388,462	106,091	44·4	28,612	25,926	54,538		
3	Shahabad	4,372	456	999,099	994,390	1,993,489	74,653	37·4	23,084	21,936	45,020		
	Total	11,154	558	3,148,866	3,079,559	6,228,425	246,230	39·5	71,109	66,426	137,535		
TIRHUT DIVISION.													
4	Saran	2,683	927	1,220,049	1,266,419	2,486,468	89,043	35·8	28,198	24,410	52,608		
5	Champanan	3,531	607	1,080,956	1,064,731	2,145,687	67,102	31·3	23,015	19,543	42,558		
6	Muzaffarpur	3,036	968	1,443,847	1,497,178	2,941,025	99,775	33·9	33,149	29,998	63,147		
7	Darbhanga	3,348	945	1,570,959	1,595,135	3,166,094	94,818	29·9	32,818	28,667	61,485		
	Total	12,598	852	5,315,811	5,423,463	10,739,274	350,738	32·6	117,180	102,618	219,798		
BHAGALPUR DIVISION.													
8	Monghyr	3,927	582	1,145,797	1,141,357	2,287,154	81,476	35·6	22,508	20,701	43,209		
9	Bhagalpur	4,226	528	1,130,584	1,104,048	2,234,632	67,091	30·0	22,422	19,467	41,889		
10	Parnea	4,972	439	1,129,681	1,056,862	2,186,543	57,803	26·4	23,297	19,597	42,894		
11	Santal Parganas	5,458	375	1,025,921	1,025,551	2,051,472	58,229	27·4	17,612	15,354	32,966		
	Total	18,583	471	4,431,983	4,327,818	8,759,801	264,599	30·2	85,839	75,119	160,958		
ORISSA DIVISION.													
12	Cuttack	3,654	595	1,028,134	1,148,573	2,176,707	81,336	37·4	27,719	28,360	56,079		
13	Balasore	2,055	482	480,518	510,082	990,600	29,219	29·5	12,795	13,902	26,697		
14	Angul	1,681	132	108,925	113,811	222,736	9,329	41·9	2,601	2,405	5,006		
15	Puri	2,492	415	500,214	534,940	1,035,194	37,154	35·9	12,918	13,370	26,288		
16	Sambalpur	3,824	230	431,460	449,485	880,945	30,165	34·2	10,979	10,145	21,124		
	Total	13,706	387	2,549,251	2,756,891	5,306,142	187,203	35·2	67,012	68,182	135,194		
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	7,021	216	751,956	765,401	1,517,357	58,347	38·4	14,108	12,874	26,982		
18	Ranchi	7,102	220	777,063	790,086	1,567,149	51,604	32·9	18,003	15,714	33,717		
19	Palamanu	4,916	166	409,778	408,958	818,736	35,526	43·4	11,125	10,135	21,260		
20	Manbhum	4,095	442	940,009	870,881	1,810,890	54,588	30·2	15,542	12,979	28,521		
21	Singhbhum	3,879	239	469,421	460,381	929,802	23,461	25·2	6,566	5,414	11,980		
	Total	27,013	235	3,348,227	3,295,707	6,643,934	223,526	33·6	65,344	57,116	122,460		
	Total for the Province	83,054	453	18,794,138	18,883,438	37,677,576	1,272,296	33·8	406,484	369,461	775,945		

DIX I—contd.

in the districts of Bihar and Orissa Province, during the year 1932.

8	9											10			11
Number of deaths of males to every 100 deaths of females.	Death-rate per 1,000 of population from—											Mean ratio of deaths per 1,000 during previous five years			No.
	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.			Male.	Female.	Total.	
									Male.	Female.	Total.				
104	0.1	0.6	...	11.9	0.4	0.5	0.3	6.6	20.3	20.8	20.6	23.7	24.6	24.1	1
110	0.1	0.4	...	16.8	0.07	0.05	0.2	5.1	23.9	21.5	22.8	29.2	27.3	28.2	2
105	0.8	1.0	0.0005	15.6	0.03	0.03	0.2	4.7	23.1	22.0	22.6	27.0	26.0	26.5	3
107	0.3	0.7	0.0003	15.0	0.2	0.2	0.3	5.4	22.6	21.5	22.1	26.8	26.1	26.5	
115	0.05	1.0	0.3	11.9	0.2	0.2	0.4	6.9	23.1	19.3	21.2	27.3	22.7	25.0	4
118	0.2	0.7	...	15.8	0.002	0.01	0.3	2.8	21.3	18.3	19.8	25.1	22.0	23.6	5
110	0.04	0.2	0.5	17.7	0.05	0.03	0.4	2.4	22.5	20.0	21.5	30.5	27.5	28.9	6
114	0.06	0.4	0.2	16.5	0.07	0.01	0.3	1.6	20.9	18.0	19.4	28.3	25.2	26.7	7
114	0.09	0.5	0.3	15.6	0.08	0.07	0.4	3.4	22.0	18.9	20.5	28.0	24.6	26.3	
109	0.02	0.2	0.1	14.4	0.03	0.03	0.2	3.8	19.6	18.1	18.9	27.6	26.0	26.8	8
115	0.2	0.2	0.001	16.2	0.03	0.03	0.3	1.7	19.8	17.6	18.7	24.5	22.6	23.5	9
119	0.2	0.1	...	18.1	0.01	0.007	0.2	0.9	20.6	18.5	19.6	22.1	22.0	24.1	10
114	0.04	0.2	...	14.2	0.06	0.1	0.1	1.3	17.2	14.9	16.1	19.3	17.1	18.2	11
114	0.1	0.2	0.04	15.7	0.03	0.04	0.2	2.0	19.4	17.3	18.4	23.7	22.1	22.9	
97	1.1	0.7	...	11.4	3.3	0.5	0.5	8.1	26.9	24.6	25.7	31.6	28.5	30.0	12
92	1.1	0.2	...	15.4	0.4	0.1	0.6	9.2	26.6	27.2	27.0	30.6	30.0	30.3	13
108	0.004	...	...	18.3	0.2	0.06	0.7	3.2	23.9	21.1	22.5	26.3	24.5	25.4	14
96	0.9	1.0	...	8.3	3.3	0.9	0.4	10.4	25.8	24.8	25.4	28.9	26.5	27.8	15
113	0.005	1.5	...	10.6	1.7	1.2	0.3	8.6	25.4	22.6	24.0	27.0	24.4	25.6	16
98	0.8	0.8	...	11.7	2.4	0.6	0.5	8.7	26.3	24.7	25.5	29.9	27.6	28.7	
109	0.01	0.03	...	14.6	0.03	0.02	0.2	2.8	18.8	16.8	17.7	22.8	20.5	21.6	17
114	0.3	0.2	...	17.9	0.4	0.04	0.2	2.3	23.2	19.8	21.5	20.8	17.9	19.3	18
109	0.1	0.3	...	21.3	0.01	0.01	0.3	4.0	27.1	24.8	26.0	30.0	27.5	28.8	19
120	0.06	0.01	...	13.8	0.03	0.05	0.1	1.7	16.5	14.9	15.7	15.9	14.4	15.2	20
121	0.001	0.003	...	11.2	0.03	0.01	0.2	1.4	13.9	11.7	12.8	14.8	12.6	13.7	21
114	0.1	0.08	...	15.5	0.1	0.03	0.2	2.3	19.5	17.3	18.4	20.1	18.1	19.1	
110	0.2	0.4	0.09	15.0	0.4	0.1	0.3	4.0	21.6	19.6	20.6	25.7	23.6	24.6	

Annual Form No. III.—Deaths registered in the districts of Bihar

1	2		3					
No.	District.	Population according to census, 1931.	January.	February.	March.	April.	May.	
PATNA DIVISION.								
1	Patna District	{ Urban ...	258,284	271	232	213	257	236
		{ Rural ...	1,588,190	2,229	1,988	2,275	2,449	2,883
		{ Total ...	1,846,474	2,500	2,220	2,488	2,706	3,119
2	Gaya District ...	{ Urban ...	105,185	203	165	141	161	225
		{ Rural ...	2,283,277	3,175	2,459	2,900	2,946	3,723
		{ Total ...	2,388,462	3,378	2,624	3,041	3,107	3,948
3	Shahabad District	{ Urban ...	117,630	53	61	38	58	61
		{ Rural ...	1,875,859	2,580	2,323	2,484	2,600	2,976
		{ Total ...	1,993,489	2,633	2,384	2,522	2,658	3,037
TIRHUT DIVISION.								
4	Saran District...	{ Urban ...	70,475	75	79	81	76	123
		{ Rural ...	2,415,993	3,938	3,539	3,686	3,826	4,435
		{ Total ...	2,486,468	4,013	3,618	3,767	3,902	4,558
5	Champaran District	{ Urban ...	45,486	14	28	34	27	20
		{ Rural ...	2,100,201	3,707	2,682	2,880	3,201	4,116
		{ Total ...	2,145,687	3,721	2,710	2,914	3,228	4,136
6	Muzaffarpur District	{ Urban ...	82,241	115	90	112	118	120
		{ Rural ...	2,858,784	5,805	4,865	4,932	5,182	5,882
		{ Total ...	2,941,025	5,920	4,955	5,044	5,300	6,002
7	Darbhanga District	{ Urban ...	98,225	124	129	143	153	218
		{ Rural ...	3,067,869	4,971	5,082	5,192	5,084	6,452
		{ Total ...	3,166,094	5,095	5,211	5,335	5,237	6,670
BHAGALPUR DIVISION.								
8	Monghyr District	{ Urban ...	83,209	86	63	78	85	62
		{ Rural ...	2,203,945	3,331	2,780	3,008	3,130	3,129
		{ Total ...	2,287,154	3,417	2,848	3,086	3,215	3,191
9	Bhagalpur District	{ Urban ...	89,080	54	50	56	56	70
		{ Rural ...	2,145,552	4,078	2,604	2,800	3,038	3,209
		{ Total ...	2,234,632	4,132	2,654	2,856	3,094	3,279
10	Purnea District	{ Urban ...	46,223	30	30	30	28	31
		{ Rural ...	2,140,320	3,926	3,201	3,588	3,641	3,995
		{ Total ...	2,186,543	3,956	3,231	3,618	3,669	4,026
11	Santal Parganas District...	{ Urban ..	48,536	7	9	6	12	13
		{ Rural ...	2,002,936	2,596	2,244	2,389	2,573	2,608
		{ Total ...	2,051,472	2,603	2,253	2,395	2,585	2,621
ORISSA DIVISION.								
12	Cuttack District	{ Urban ...	88,556	94	94	92	79	61
		{ Rural ...	2,088,151	4,839	4,697	4,556	3,630	4,012
		{ Total ...	2,176,707	4,933	4,791	4,648	3,709	4,073
13	Balasore District	{ Urban ...	17,843	22	18	21	22	10
		{ Rural ...	972,757	2,547	2,379	2,111	2,008	1,761
		{ Total ...	990,600	2,569	2,397	2,132	2,030	1,771

DIX I—contd.

and Orissa Province, during each month of the year 1932.

4							5	
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
269	352	395	323	316	250	308	3,422	1
3,939	3,340	3,866	3,496	3,059	2,791	2,240	34,555	
4,208	3,692	4,261	3,819	3,375	3,041	2,548	37,977	
362	334	394	353	295	266	286	3,185	2
5,639	5,106	5,881	6,416	5,117	4,257	3,734	51,353	
6,001	5,440	6,275	6,769	5,412	4,523	4,020	54,538	
105	86	94	100	66	47	53	822	3
4,918	4,720	5,326	5,104	4,491	3,461	3,215	44,198	
5,023	4,806	5,420	5,204	4,557	3,508	3,268	45,020	
131	149	126	128	102	76	82	1,228	4
5,156	5,461	5,300	4,839	3,661	3,630	3,909	51,380	
5,237	5,610	5,426	4,967	3,763	3,706	3,991	52,608	
39	34	24	27	27	25	24	323	5
4,051	3,822	3,882	3,725	3,194	3,557	3,418	42,235	
4,090	3,856	3,906	3,752	3,221	3,582	3,442	42,558	
127	143	143	109	119	94	113	1,403	6
5,418	5,091	4,815	4,668	5,279	5,116	4,691	61,744	
5,545	5,234	4,958	4,777	5,398	5,210	4,804	63,147	
172	122	122	85	103	101	120	1,592	7
5,094	4,962	4,786	4,671	4,162	4,736	4,701	59,893	
5,266	5,084	4,908	4,756	4,265	4,837	4,821	61,485	
72	74	102	96	79	77	70	949	8
3,258	3,225	3,689	4,240	3,950	4,331	4,189	42,260	
3,330	3,299	3,791	4,336	4,029	4,406	4,259	43,209	
55	64	63	86	62	62	61	739	9
2,744	2,843	2,745	3,879	3,662	4,660	4,883	41,150	
2,799	2,907	2,808	3,965	3,724	4,722	4,949	41,889	
35	36	25	30	23	38	32	368	10
3,478	3,071	2,531	3,225	3,046	3,779	5,045	42,526	
3,513	3,107	2,556	3,255	3,069	3,817	5,077	42,894	
13	16	24	17	11	10	19	157	11
2,774	2,487	2,981	3,546	2,998	2,781	2,832	32,809	
2,787	2,503	3,005	3,563	3,009	2,791	2,851	32,966	
70	81	73	73	93	77	107	994	12
3,425	3,989	5,434	3,522	4,298	5,367	7,316	55,085	
3,495	4,070	5,507	3,595	4,391	5,444	7,423	56,079	
19	31	27	29	37	40	51	327	13
1,114	1,663	2,325	1,782	2,151	2,938	3,591	26,370	
1,133	1,694	2,352	1,811	2,188	2,978	3,642	26,697	

Annual Form No. III.—Deaths registered in the districts of Bihar

1	2	3					
No.	Di strict.	Population according to census, 1931.	January.	February.	March.	April.	May.
ORISSA DIVISION—concl'd.							
14	Angul district ...	{ Rural ... 222,736	397	378	382	452	438
		{ Total ... 222,736	397	378	382	452	438
15	Puri district ...	{ Urban ... 37,568	90	78	82	62	94
		{ Rural ... 997,586	2,316	2,136	2,009	2,131	2,162
		{ Total ... 1,035,154	2,406	2,214	2,091	2,193	2,256
16	Sambalpur District ...	{ Urban ... 15,017	32	12	21	13	20
		{ Rural ... 865,928	1,548	1,887	1,691	1,646	1,789
		{ Total ... 880,945	1,580	1,899	1,712	1,659	1,809
CHOTA NAGPUR DIVISION.							
17	Hazaribagh District ...	{ Urban ... 50,857	29	23	35	22	21
		{ Rural ... 1,466,500	2,315	1,801	1,723	2,027	2,224
		{ Total ... 1,517,357	2,344	1,824	1,758	2,049	2,245
18	Ranchi District ...	{ Urban ... 58,094	18	17	10	18	26
		{ Rural ... 1,509,055	1,866	2,410	2,408	2,362	2,727
		{ Total ... 1,567,149	1,884	2,427	2,418	2,380	2,753
19	Palamau District ...	{ Urban ... 12,040	6	4	4	2	2
		{ Rural ... 806,696	1,644	1,331	1,375	1,501	1,546
		{ Total ... 818,736	1,650	1,335	1,379	1,503	1,548
20	Manbhum District ...	{ Urban ... 56,393	47	39	67	58	60
		{ Rural ... 1,754,497	1,951	1,732	1,963	2,303	2,438
		{ Total ... 1,810,890	1,998	1,771	2,030	2,361	2,498
21	Singhbhum District ...	{ Urban ... 30,697	20	12	13	19	24
		{ Rural ... 899,105	911	935	920	954	944
		{ Total ... 929,802	931	947	933	973	968
Total for the province		{ Urban ... (a)1,411,639	1,390	1,238	1,277	1,326	1,497
		{ Rural ... 36,265,937	60,670	53,453	55,272	56,684	63,449
		{ Total ... 3,767,576	62,060	54,691	56,549	58,010	64,946
Ratio per 1,000 of popula-		{ Urban ...	1.0	0.9	0.9	0.9	1.0
tion.		{ Rural ...	1.7	1.5	1.5	1.6	1.7
		{ Total ...	1.6	1.4	1.5	1.5	1.7

(a) Including cantonment population.

DIX I—contd.

and Orissa Province, during each month of the year 1932.

3							4	5
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
389	332	444	497	435	382	480	5,006	} 14
389	332	444	497	435	382	480	5,006	
76	96	89	95	102	106	105	1,075	} 15
2,152	2,063	2,199	1,446	1,698	2,138	2,763	25,213	
2,228	2,159	2,288	1,541	1,800	2,244	2,868	26,288	} 16
16	20	34	36	18	22	22	266	
1,508	1,441	2,035	2,047	1,763	1,427	2,076	20,858	} 16
1,524	1,461	2,069	2,083	1,781	1,449	2,098	21,124	
32	30	40	17	16	24	19	308	} 17
2,205	2,037	2,383	2,453	2,339	2,541	2,626	26,674	
2,237	2,067	2,423	2,470	2,355	2,565	2,645	26,982	} 18
28	19	44	20	25	71	47	343	
2,558	2,335	3,790	3,915	3,506	3,208	2,289	33,374	} 18
2,586	2,354	3,834	3,935	3,531	3,279	2,336	33,717	
7	2	8	15	10	9	1	70	} 19
1,913	1,652	1,828	1,895	2,376	2,334	1,795	21,190	
1,920	1,654	1,836	1,910	2,386	2,343	1,796	21,260	} 20
69	56	77	63	45	29	44	654	
2,234	2,277	2,502	3,363	2,575	2,270	2,259	27,867	} 20
2,303	2,333	2,579	3,426	2,620	2,299	2,303	28,521	
33	21	33	17	13	22	23	250	} 21
790	926	1,101	1,196	986	1,048	1,019	11,730	
823	947	1,134	1,213	999	1,070	1,042	11,980	} 21
1,730	1,766	1,937	1,719	1,562	1,446	1,587	18,475	
64,757	62,843	69,843	69,925	64,746	66,752	69,076	757,470	} 21
66,487	64,609	71,780	71,644	66,308	68,198	70,663	775,945	
1·2	1·2	1·4	1·2	1·1	1·0	1·1	13·1	} 21
1·8	1·7	1·9	1·9	1·8	1·8	1·9	20·9	
1·8	1·7	1·9	1·9	1·7	1·8	1·9	20·6	} 21

Annual Form No. IV.—Deaths registered according to age in the

1	2							Deaths under	
No.	District.	Not exceeding one month.						Total of columns 3 and 6.	
		Male.			Female.				
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.		
		1	2	3	4	5	6		7
PATNA DIVISION.									
1	Patna district	Urban ...	150	72	222	114	43	157	379
		Rural ...	1,547	919	2,466	1,244	725	1,969	4,435
		Total ...	1,697	991	2,688	1,358	768	2,126	4,814
2	Gaya district ...	Urban ...	167	74	241	93	62	155	396
		Rural ...	3,212	1,211	4,423	2,731	804	3,535	7,958
		Total ...	3,379	1,285	4,664	2,824	866	3,690	8,354
3	Shahabad district	Urban ...	61	14	75	41	7	48	123
		Rural ...	3,998	830	4,828	3,364	576	3,940	8,768
		Total ...	4,059	844	4,903	3,405	583	3,988	8,891
TIRHUT DIVISION.									
4	Saran district ...	Urban ...	70	50	120	34	36	70	190
		Rural ...	1,945	1,073	3,018	1,480	746	2,226	5,244
		Total ...	2,015	1,123	3,138	1,514	782	2,296	5,434
5	Champaran district	Urban ...	18	4	22	14	2	16	38
		Rural ...	2,442	539	2,981	1,922	415	2,337	5,318
		Total ...	2,460	543	3,003	1,936	417	2,353	5,356
6	Muzaffarpur district	Urban ...	68	40	108	64	40	104	212
		Rural ...	2,173	832	3,005	1,850	668	2,518	5,523
		Total ...	2,241	872	3,113	1,914	708	2,622	5,735
7	Darbhanga district	Urban ...	48	28	76	35	25	60	136
		Rural ...	1,938	508	2,446	1,486	368	1,854	4,300
		Total ...	1,986	536	2,522	1,521	393	1,914	4,436
BHAGALPUR DIVISION.									
8	Monghyr district	Urban ...	76	19	95	53	6	59	154
		Rural ...	1,455	788	2,223	1,219	553	1,772	3,995
		Total ...	1,511	807	2,318	1,272	559	1,831	4,149
9	Bhagalpur district	Urban ...	30	23	53	37	18	55	108
		Rural ...	1,227	393	1,620	1,051	330	1,381	3,001
		Total ...	1,257	416	1,673	1,088	348	1,436	3,109
10	Purnea district...	Urban ...	12	3	15	9	3	12	27
		Rural ...	1,283	495	1,778	954	384	1,338	3,116
		Total ...	1,295	498	1,793	963	387	1,350	3,143
11	Santal Parganas district	Urban ...	12	...	12	7	1	8	20
		Rural ...	1,012	285	1,297	745	267	1,012	2,309
		Total ...	1,024	285	1,309	752	268	1,020	2,329
ORISSA DIVISION.									
12	Cuttack district	Urban ...	38	17	55	28	19	47	102
		Rural ...	2,447	1,638	4,085	1,959	1,383	3,342	7,427
		Total ...	2,485	1,655	4,140	1,987	1,402	3,389	7,529

DIX I—*contd.**districts of Bihar and Orissa Province, during the year 1932—contd.*

3									
one year.									
Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
8	9	10	11	12	13	14	15	16	
121	94	215	91	83	174	434	334	768	1
1,908	1,696	3,604	1,148	1,017	2,165	5,322	4,682	10,204	
2,029	1,790	3,819	1,239	1,100	2,339	5,956	5,016	10,972	
155	133	288	93	76	169	489	364	853	2
2,372	1,864	4,236	1,558	1,247	2,805	8,353	6,646	14,999	
2,527	1,997	4,524	1,651	1,323	2,974	8,842	7,010	15,852	
35	25	60	26	18	44	136	91	227	3
1,515	1,245	2,760	1,029	813	1,842	7,372	5,998	13,370	
1,550	1,270	2,820	1,055	831	1,886	7,508	6,089	13,597	
66	55	121	49	46	95	235	171	406	4
1,621	1,231	2,852	1,337	1,011	2,348	5,976	4,468	10,444	
1,687	1,236	2,923	1,386	1,057	2,443	6,211	4,639	10,850	
20	18	38	7	9	16	49	43	92	5
1,014	854	1,868	640	492	1,132	4,635	3,683	8,318	
1,034	872	1,906	647	501	1,148	4,684	3,726	8,410	
65	49	114	46	46	92	219	199	418	6
1,589	1,284	2,873	1,054	843	1,897	5,648	4,645	10,293	
1,654	1,333	2,987	1,100	889	1,989	5,867	4,844	10,711	
49	42	91	46	42	88	171	144	315	7
1,176	1,010	2,186	737	557	1,294	4,359	3,421	7,780	
1,225	1,052	2,277	783	599	1,382	4,530	3,565	8,095	
46	27	73	44	24	68	185	110	295	8
1,451	1,233	2,684	1,005	889	1,894	4,679	3,894	8,573	
1,497	1,260	2,757	1,049	913	1,962	4,864	4,004	8,863	
27	19	46	28	19	47	108	93	201	9
896	774	1,670	619	441	1,060	3,135	2,596	5,731	
923	793	1,716	647	460	1,107	3,243	2,689	5,932	
20	9	29	11	4	15	46	25	71	10
1,424	1,063	2,487	447	378	825	3,649	2,779	6,428	
1,444	1,072	2,516	458	382	840	3,695	2,804	6,499	
7	2	9	2	5	7	21	15	36	11
686	601	1,287	379	298	677	2,362	1,911	4,273	
693	603	1,296	381	303	684	2,383	1,926	4,309	
42	28	70	11	14	25	108	89	197	12
2,745	2,532	5,277	1,178	1,115	2,293	8,008	6,989	14,997	
2,787	2,560	5,347	1,189	1,129	2,318	8,116	7,078	15,194	

Annual Form No. IV.—Deaths registered according to age in the

1	2	Deaths under						
No.	District.	Not exceeding one month.						Total of columns 3 and 6.
		Male.			Female.			
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	
		1	2	3	4	5	6	7
ORISSA DIVISION.								
13	Balasore district ... { Urban ... Rural ... Total ...	19 1,183 1,202	7 602 609	26 1,785 1,811	17 950 967	9 569 578	26 1,519 1,545	52 3,304 3,356
14	Angul district ... { Rural ... Total ...	263 263	198 198	461 461	199 199	196 196	395 395	856 856
15	Puri district ... { Urban ... Rural ... Total ...	40 1,184 1,224	34 885 919	74 2,069 2,143	28 980 1,008	20 702 722	48 1,682 1,730	122 3,751 3,873
16	Sambalpur district ... { Urban ... Rural ... Total ...	17 1,276 1,293	8 886 894	25 2,162 2,187	8 1,102 1,110	8 757 765	16 1,859 1,875	41 4,021 4,062
CHOTA NAGPUR DIVISION.								
17	Hazaribagh district ... { Urban ... Rural ... Total ...	12 1,194 1,206	6 430 436	18 1,624 1,642	9 967 976	6 376 382	15 1,343 1,358	33 2,967 3,000
18	Ranchi district ... { Urban ... Rural ... Total ...	12 968 980	3 531 534	15 1,499 1,514	4 775 779	8 455 463	12 1,230 1,242	27 2,729 2,756
19	Palamanu district ... { Urban ... Rural ... Total ...	2 1,204 1,206	2 369 371	4 1,573 1,577	2 972 974	2 313 315	4 1,285 1,289	8 2,858 2,866
20	Manbhum district ... { Urban ... Rural ... Total ...	39 1,008 1,047	4 418 422	43 1,426 1,469	18 767 785	13 333 346	31 1,100 1,131	74 2,526 2,600
21	Singhbhum district ... { Urban ... Rural ... Total ...	10 363 373	5 137 142	15 500 515	14 234 248	7 95 102	21 329 350	36 829 865
	Total for the Province ... { Urban ... Rural ... Total ...	901 33,302 34,203	413 13,967 14,380	1,314 47,269 48,583	629 26,951 27,580	335 11,015 11,350	964 37,966 38,930	2,278 85,235 87,513
	Total population for the province ...	...	...	...	...	...	...	...
	Ratio per 1,000 of population ...	...	...	...	...	...	...	...

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1932—contd.

8

one year.

Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
8	9	10	11	12	13	14	15	16	
6	8	14	2	2	4	34	36	70	} 13
1,228	1,199	2,427	430	464	894	3,443	3,182	6,625	
1,234	1,207	2,441	432	466	898	3,477	3,218	6,695	
350	313	663	196	160	356	1,007	868	1,875	} 14
350	313	663	196	160	356	1,007	868	1,875	
28	37	65	17	20	37	119	105	224	} 15
1,144	1,077	2,221	622	598	1,220	3,835	3,357	7,192	
1,172	1,114	2,286	639	618	1,257	3,954	3,462	7,416	
14	6	20	10	3	13	49	25	74	} 16
764	673	1,437	432	422	854	3,358	2,954	6,312	
778	679	1,457	442	425	867	3,407	2,979	6,386	
14	15	29	6	10	16	38	40	78	} 17
905	746	1,651	438	358	796	2,967	2,447	5,414	
919	761	1,680	444	368	812	3,005	2,487	5,492	
10	12	22	6	8	14	31	32	63	} 18
1,002	865	1,867	487	441	928	2,983	2,536	5,524	
1,012	877	1,889	493	449	942	3,019	2,568	5,587	
4	1	5	...	1	1	8	6	14	} 19
731	672	1,403	419	388	807	2,723	2,345	5,068	
735	673	1,408	419	389	808	2,731	2,351	5,082	
17	10	27	7	6	13	67	47	114	} 20
687	502	1,189	270	212	482	2,383	1,814	4,197	
704	512	1,216	277	218	495	2,450	1,861	4,311	
17	7	24	9	8	17	41	36	77	} 21
327	251	578	150	145	295	977	725	1,702	
344	258	602	159	153	312	1,018	761	1,779	
763	597	1,360	511	444	955	2,588	2,005	4,593	
25,535	21,685	47,220	14,575	12,289	26,864	87,379	71,940	159,319	
26,298	22,282	48,580	15,086	12,733	27,819	89,967	73,945	163,912	
...	459,557	467,993	927,550	
...	138.2	119.0	128.8	

Annual Form No. IV.—Deaths registered according to age in the

1	2		3		4		5		6	
No.	District.		1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.	
			Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
			17	18	19	20	21	22	23	24
PATNA DIVISION.										
1	Patna district	Urban ...	281	288	91	97	60	89	65	134
		Rural ...	4,282	4,201	848	756	357	354	331	449
		Total ...	4,563	4,489	939	853	417	443	396	583
2	Gaya district	Urban ...	299	246	80	82	38	54	70	102
		Rural ...	6,502	6,244	1,358	1,183	752	544	572	597
		Total ...	6,801	6,490	1,438	1,265	790	598	642	699
3	Shahabad district	Urban ...	63	61	21	15	10	13	17	24
		Rural ...	4,322	4,174	1,115	933	648	493	640	716
		Total ...	4,385	4,235	1,136	948	658	506	657	740
TIRHUT DIVISION.										
4	Saran district	Urban ...	108	81	26	32	15	17	25	35
		Rural ...	6,166	5,232	1,535	1,251	942	685	842	707
		Total ...	6,274	5,313	1,561	1,283	957	702	867	742
5	Champaran district	Urban ...	36	30	15	6	6	8	8	6
		Rural ...	4,935	4,195	1,142	977	694	424	717	494
		Total ...	4,971	4,225	1,157	983	700	432	725	500
6	Muzaffarpur district	Urban ...	106	109	43	26	37	29	29	28
		Rural ...	7,141	6,673	2,006	1,687	1,167	795	879	759
		Total ...	7,247	6,782	2,049	1,713	1,204	824	908	787
7	Darbhanga district	Urban ...	171	168	59	50	26	32	29	34
		Rural ...	6,788	6,412	2,430	1,881	1,189	693	1,018	763
		Total ...	6,959	6,580	2,489	1,931	1,215	925	1,047	797
BHAGALPUR DIVISION.										
8	Monghyr district	Urban ...	82	90	24	24	20	8	16	15
		Rural ...	5,409	5,320	1,275	1,160	722	582	630	546
		Total ...	5,491	5,410	1,299	1,184	742	590	646	561
9	Bhagalpur district	Urban ...	61	72	20	18	24	11	10	14
		Rural ...	4,446	4,042	1,739	1,411	977	620	850	746
		Total ...	4,507	4,114	1,759	1,429	1,001	631	860	760
10	Purnea district	Urban ...	29	21	13	9	11	10	9	15
		Rural ...	4,106	3,388	1,762	1,250	1,048	647	889	942
		Total ...	4,135	3,409	1,775	1,259	1,059	657	898	957
11	Santal Parganas district	Urban ...	9	9	9	4	2	3	2	8
		Rural ...	3,438	2,934	1,342	1,137	851	646	929	988
		Total ...	3,447	2,943	1,351	1,141	853	649	931	946
ORISSA DIVISION.										
12	Cuttack district	Urban ...	36	38	15	13	9	13	23	28
		Rural ...	4,612	4,771	1,331	1,251	738	602	821	1,252
		Total ...	4,648	4,809	1,346	1,264	747	615	844	1,280
13	Balasore district	Urban ...	19	20	5	4	9	3	7	18
		Rural ...	1,709	1,796	501	533	287	266	422	677
		Total ...	1,728	1,816	506	537	296	269	429	695

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1932—contd.

7		8		9		10		11		12
20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
25	26	27	28	29	30	31	32	33	34	
159	217	152	112	121	86	145	78	239	240	1
861	1,179	891	883	969	822	1,100	938	2,505	2,625	
1,020	1,396	1,043	995	1,090	908	1,245	1,016	2,744	2,865	
128	192	111	117	128	83	119	71	211	201	2
1,589	1,858	1,464	1,470	1,636	1,292	1,740	1,516	2,973	3,064	
1,717	2,050	1,575	1,587	1,764	1,375	1,859	1,587	3,184	3,265	
40	53	23	27	36	23	37	18	63	51	3
1,850	2,127	1,780	1,715	1,369	1,195	1,268	1,172	2,274	3,037	
1,890	2,160	1,803	1,742	1,405	1,218	1,305	1,190	2,337	3,088	
45	53	59	50	43	28	39	39	57	70	4
2,161	2,092	2,376	2,131	1,945	1,493	1,779	1,574	3,824	4,201	
2,206	2,145	2,435	2,181	1,988	1,521	1,818	1,613	3,881	4,271	
14	18	14	7	6	6	13	5	20	13	5
2,000	1,852	2,228	1,759	2,158	1,664	1,899	1,747	2,426	2,606	
2,014	1,870	2,242	1,766	2,164	1,670	1,912	1,752	2,446	2,619	
63	60	62	33	46	34	69	43	81	87	6
2,709	2,395	2,993	2,470	2,842	2,198	2,721	2,687	4,288	5,041	
2,712	2,455	3,055	2,503	2,888	2,232	2,790	2,730	4,369	5,128	
70	89	99	57	66	44	63	55	78	87	7
3,018	2,622	3,284	2,687	2,954	2,078	2,818	2,704	4,128	4,446	
3,088	2,711	3,383	2,744	3,020	2,122	2,881	2,759	4,206	4,533	
37	43	36	26	30	12	25	20	83	63	8
1,531	1,433	1,608	1,335	1,643	1,318	1,664	1,594	2,809	3,108	
1,568	1,476	1,644	1,361	1,673	1,330	1,689	1,614	2,892	3,171	
27	17	30	30	30	17	30	16	56	55	9
2,138	1,797	2,268	1,921	2,113	1,634	1,865	1,647	2,495	2,710	
2,165	1,814	2,298	1,951	2,143	1,651	1,895	1,663	2,551	2,765	
21	23	17	16	12	11	14	12	24	30	10
2,541	3,035	2,723	2,406	2,422	1,641	1,882	1,536	2,079	1,801	
2,562	3,058	2,740	2,422	2,434	1,652	1,896	1,548	2,103	1,831	
11	9	10	7	4	4	10	5	9	6	11
1,867	1,943	1,850	1,555	1,610	1,153	1,449	1,221	1,827	1,846	
1,878	1,952	1,860	1,562	1,614	1,157	1,459	1,226	1,836	1,852	
78	85	55	43	77	42	60	25	89	69	12
2,154	3,155	2,261	2,394	2,111	1,770	2,422	2,296	2,712	3,435	
2,232	3,240	2,316	2,437	2,188	1,812	2,482	2,321	2,800	3,504	
24	38	12	9	17	10	19	15	13	15	13
1,148	1,857	1,340	1,554	1,287	1,168	1,268	1,288	1,231	1,413	
1,172	1,895	1,352	1,563	1,304	1,178	1,287	1,303	1,244	1,428	

Annual Form No. IV.—Deaths registered according to age in the

1	2	3	4	5	6					
No.	District.	1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
		17	18	19	20	21	22	23	24	
	ORISSA DIVISION—concl'd.									
14	Angul district ...	Rural ...	500	453	103	89	64	62	63	60
		Total ...	500	453	103	89	64	62	63	60
15	Puri district ...	Urban ...	37	45	14	15	15	12	12	25
		Rural ...	2,017	2,175	585	584	280	250	305	571
16	Sambalpur district ...	Total ...	2,054	2,220	599	599	295	262	317	596
		Urban ...	22	18	4	6	3	5	3	1
		Rural ...	1,643	1,539	552	464	320	265	349	368
		Total ...	1,665	1,557	556	470	323	270	352	369
	CHOTA NAGPUR DIVISION.									
17	Hazaribagh district ...	Urban ...	33	31	9	9	5	1	4	11
		Rural ...	3,257	3,031	1,137	974	619	503	531	469
18	Ranchi district ...	Total ...	3,290	3,062	1,146	983	624	504	535	480
		Urban ...	47	38	12	15	6	10	7	9
		Rural ...	5,060	4,030	1,128	898	736	647	782	814
		Total ...	5,107	4,068	1,140	913	742	657	789	823
19	Palamau district ...	Urban ...	12	5	2	...	...	2	1	1
		Rural ...	3,123	2,806	788	675	405	334	369	361
20	Manbhum district ...	Total ...	3,135	2,811	790	675	405	336	370	362
		Urban ...	44	33	19	16	10	9	25	16
		Rural ...	2,330	2,129	1,060	808	815	630	1,138	997
		Total ...	2,374	2,162	1,079	824	825	639	1,163	1,013
21	Singhbhum district ...	Urban ...	17	19	6	4	3	3	6	1
		Rural ...	1,214	1,104	519	433	286	196	277	235
		Total ...	1,231	1,123	525	437	289	199	283	236
		Urban ...	1,512	1,422	487	445	309	332	368	525
	Total for the Province ...	Rural ...	83,000	76,649	24,256	20,335	13,897	10,438	13,354	13,461
		Total ...	84,512	78,071	24,743	20,780	14,206	10,770	13,722	13,986
	Total population for the province ...		2,274,148	2,400,907	2,642,921	2,430,279	2,302,350	2,043,919	1,563,970	1,620,928
	Ratio per 1,000 of population ...		37.2	32.5	9.4	8.5	6.2	5.3	8.8	8.6

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1932—concl'd.

7		8		9		10		11		12
20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
25	26	27	28	29	30	31	32	33	34	
147	144	159	173	176	120	161	180	221	256	14
147	144	159	173	176	120	161	180	221	256	
54	38	54	55	92	56	70	65	79	113	15
946	1,407	907	982	942	789	1,196	1,158	1,359	1,568	
1,000	1,445	961	1,037	1,034	845	1,266	1,223	1,438	1,681	16
11	17	14	9	20	4	9	14	14	18	
717	873	932	718	910	639	856	836	1,193	1,372	17
728	890	946	727	930	643	865	850	1,207	1,390	
15	14	6	7	10	6	14	10	17	28	18
1,038	1,213	1,098	961	1,046	789	1,079	1,006	1,213	1,324	
1,053	1,227	1,104	968	1,028	795	1,093	1,016	1,230	1,352	19
13	23	19	11	8	9	11	8	14	20	
1,395	1,380	1,285	1,112	1,271	988	1,522	1,495	1,668	1,639	20
1,408	1,403	1,304	1,123	1,279	997	1,533	1,503	1,682	1,659	
2	3	3	1	7	2	4	2	5	4	21
846	908	784	736	780	609	690	652	573	683	
848	911	787	737	787	611	694	654	578	687	22
38	37	48	33	46	22	41	18	49	36	
1,620	1,567	1,528	1,133	1,376	984	1,298	1,135	1,607	1,515	23
1,658	1,604	1,576	1,166	1,422	1,006	1,339	1,153	1,656	1,551	
8	11	10	8	12	6	12	13	18	16	24
560	542	674	452	661	369	593	485	652	756	
588	553	684	460	673	375	605	498	670	772	25
858	1,040	834	658	811	505	804	532	1,218	1,222	
32,856	35,379	34,433	30,547	32,193	24,713	31,270	28,867	44,057	48,446	26
33,714	36,419	35,267	31,205	33,004	25,218	32,074	29,399	45,275	49,668	
3,218,213	3,422,319	2,714,059	2,737,421	1,865,043	1,811,586	1,069,752	1,099,899	684,125	848,187	
10.5	10.6	13.0	11.4	17.7	13.9	29.9	26.7	66.2	53.5	

Annual Form No. V.—Deaths registered according to class in the

1	2	3											
No.	District.	Population according to											
		Christians.			Hindus.			Muhammadans.			Buddhists.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
	PATNA DIVISION.												
1	Patna	1,990	1,513	3,503	852,682	787,147	1,639,829	101,175	101,480	202,655	15	1	16
2	Gaya	298	278	576	1,075,495	1,058,046	2,133,541	117,436	136,124	253,560	13	6	19
3	Shahabad	1,083	1,252	2,335	924,382	914,580	1,838,862	73,260	78,108	151,368	5	6	11
	TIRHUT DIVISION.												
4	Saran	282	178	460	1,072,048	1,104,936	2,176,984	147,703	161,302	309,005	...	...	...
5	Champaran	1,681	1,974	3,655	903,010	884,264	1,787,274	175,988	178,247	354,235	...	...	...
6	Muzaffarpur	481	406	887	1,258,489	1,290,517	2,549,006	184,852	206,239	391,091	1	...	1
7	Darbhanga	286	245	531	1,354,928	1,370,499	2,725,427	215,663	224,374	440,037	...	...	...
	BHAGALPUR DIVISION.												
8	Monghyr	1,058	859	1,917	1,031,465	1,017,727	2,049,192	109,408	119,089	228,497	3	1	4
9	Bhagalpur	881	679	1,560	1,002,664	977,598	1,980,262	125,257	124,179	249,436	...	...	...
10	Purnea	973	850	1,823	665,451	619,863	1,285,314	456,347	430,021	886,368	...	...	...
11	Santal Parganas	6,464	6,882	13,346	475,601	473,597	949,198	112,839	110,863	223,702	...	...	...
	ORISSA DIVISION.												
12	Cuttack	1,222	1,651	2,873	996,424	1,110,406	2,106,830	29,965	86,139	66,104	209	183	392
13	Balasore	685	690	1,375	457,943	486,738	944,681	15,661	16,074	31,735	1	...	1
14	Angul	156	151	307	80,344	83,319	163,663	176	117	293	...	...	...
15	Puri	768	768	1,536	488,555	522,524	1,011,079	10,875	11,643	22,518	2	1	3
16	Sambalpur	1,780	1,838	3,618	426,029	444,149	870,178	2,008	1,805	3,813	...	...	...
	CHOTA NAGPUR DIVISION.												
17	Hazaribagh	1,706	1,463	3,169	597,528	610,571	1,208,099	84,799	86,895	171,694	135	86	221
18	Ranchi	130,114	132,494	262,608	433,323	436,169	869,492	33,778	32,269	66,047	9	4	13
19	Palamau	4,242	4,365	8,607	335,519	334,442	669,961	37,369	37,132	74,501	...	...	...
20	Manbhum	3,922	3,734	7,656	824,012	768,515	1,592,527	61,712	49,665	111,377	2	4	6
21	Singhbhum	10,056	9,496	19,552	237,465	222,610	460,075	16,543	10,211	26,754	153	74	232
	Total for the Province	170,128	171,766	341,894	15,493,257	15,518,217	31,011,474	2,112,814	2,151,976	4,264,790	553	366	919

DIX I—contd

districts of Bihar and Orissa Province, during the year 1932—contd.

						4											
census, 1931.						Number of deaths registered.											
Other classes.			Total.			Christians.			Hindus.			Muhammadans.					
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	No.		
262	209	471	956,124	890,350	1,846,474	9	3	12	17,543	16,889	34,432	1,861	1,672	3,533	1		
401	365	766	1,193,643	1,194,819	2,388,462	3	3	6	25,829	23,399	49,228	2,755	2,509	5,264	2		
469	444	913	999,099	994,390	1,993,489	1	1	2	21,781	20,623	42,404	1,302	1,309	2,611	3		
16	3	19	1,220,049	1,266,419	2,486,468	1	2	3	25,044	21,908	46,952	3,153	2,500	5,653	4		
277	246	523	1,080,956	1,064,731	2,145,687	30	31	61	19,964	17,012	36,976	3,017	2,493	5,510	5		
24	16	40	1,443,847	1,497,178	2,941,025	6	5	11	29,260	26,643	55,903	3,883	3,350	7,233	6		
82	17	99	1,570,959	1,595,135	3,166,094	4	4	8	28,618	25,208	53,826	4,196	3,455	7,651	7		
3,863	3,681	7,544	1,145,797	1,141,357	2,287,154	5	4	9	20,492	18,921	39,413	2,010	1,776	3,786	8		
1,782	1,592	3,374	1,130,584	1,104,048	2,234,632	4	9	13	20,355	17,803	38,158	2,051	1,645	3,696	9		
6,910	6,128	13,038	1,129,681	1,056,862	2,186,543	8	6	14	13,997	12,037	26,034	9,263	7,521	16,784	10		
431,017	434,209	865,226	1,025,921	1,025,551	2,051,472	44	66	110	9,661	8,438	18,099	1,994	1,637	3,631	11		
314	194	508	1,028,134	1,148,573	2,176,707	11	5	16	26,977	27,611	54,588	713	716	1,429	12		
6,223	6,580	12,808	480,518	510,082	990,600	8	8	16	12,329	13,456	25,785	364	348	712	13		
28,249	30,224	58,473	108,925	113,811	222,736	...	1	1	1,658	1,541	3,199	7	1	8	14		
14	4	18	500,214	534,940	1,035,154	5	7	12	12,692	13,171	25,863	221	192	413	15		
1,643	1,693	3,336	431,460	449,485	880,945	11	22	33	10,944	10,103	21,050	16	10	26	16		
67,788	66,386	134,174	751,956	765,401	1,517,357	5	8	13	12,409	11,405	23,814	1,344	1,131	2,478	17		
179,839	189,150	368,989	777,063	790,086	1,567,149	2,318	2,072	4,390	4,854	4,474	9,328	700	579	1,279	18		
32,648	33,019	65,667	409,778	408,958	818,736	79	75	154	10,127	9,176	19,303	875	854	1,729	19		
50,361	48,963	99,324	940,009	870,881	1,810,890	23	16	39	13,505	11,221	24,726	785	628	1,413	20		
205,199	217,990	423,189	469,421	460,381	929,802	75	57	132	2,741	2,198	4,939	71	58	129	21		
1,017,386	1,041,113	2,058,499	18,794,138	18,883,438	37,677,576	2,650	2,405	5,055	340,780	313,240	654,020	40,581	34,387	74,958			

Annual Form No. V.—Deaths registered according to class in the

1	2	3												
No.	District.	Number of deaths registered —concl'd.									Ratio of deaths.			
		Buddhists.			Other classes.			Total.			Christians.			
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
	PATNA DIVISION.													
1	Patna ... ..	...	...	...	...	...	...	19,413	18,564	37,977	4·5	1·9	3·4
2	Gaya ... ..	...	...	...	25	15	40	28,612	25,926	54,538	10·1	10·8	10·4
3	Shahabad ... ..	...	...	...	...	3	3	23,084	21,936	45,020	0·9	0·8	0·9
	TIRHUT DIVISION.													
4	Saran ... ..	...	...	...	...	...	...	28,198	24,410	52,608	3·5	11·2	6·5
5	Champaran ... ..	...	...	...	4	7	11	23,015	19,543	42,558	17·8	15·7	16·7
6	Muzaffarpur ... ..	...	...	...	...	...	...	33,149	29,998	63,147	12·5	12·3	12·4
7	Darbhanga ... ..	...	...	...	...	...	...	32,818	28,667	61,485	14·0	16·3	15·0
	BHAGALPUR DIVISION.													
8	Monghyr ... ..	...	...	...	1	...	1	22,508	20,701	43,209	4·7	4·6	4·7
9	Bhagalpur ... ..	...	...	...	12	10	22	22,422	19,467	41,889	4·5	13·2	8·3
10	Purnea ... ..	...	...	...	29	33	62	28,297	19,597	42,894	8·2	7·0	7·7
11	Santal Parganas ... ..	...	...	...	5,913	5,213	11,126	17,612	15,354	32,966	6·8	9·6	8·2
	ORISSA DIVISION.													
12	Cuttack ... ..	...	...	...	18	28	46	27,719	28,360	56,079	8·2	2·4	4·9
13	Balasore ... ..	...	...	...	94	90	184	12,795	13,902	26,697	11·7	11·6	11·6
14	Angul ... ..	...	...	...	936	862	1,798	2,601	2,405	5,003	...	6·6	3·2
15	Puri ... ..	...	...	...	...	...	...	12,918	13,370	26,288	6·5	9·1	7·8
16	Sambalpur ... ..	...	...	...	8	7	15	10,979	10,145	21,124	6·1	11·9	9·1
	CHOTA NAGPUR DIVISION.													
17	Hazaribagh ... ..	...	...	...	350	327	677	14,108	12,874	26,982	2·9	5·4	4·1
18	Ranchi ... ..	...	...	...	10,131	8,589	18,720	18,003	15,714	33,717	17·8	15·6	16·7
19	Palamau ... ..	...	...	...	44	30	74	11,125	10,135	21,260	18·6	17·2	17·9
20	Manbhum ... ..	...	...	...	1,229	1,114	2,343	15,542	12,979	28,521	5·9	4·2	5·1
21	Singhbhum	9	...	9	3,670	3,101	6,771	6,566	5,414	11,980	7·4	6·0	6·7	
	Total for the Province	9	...	9	22,464	19,429	41,893	406,484	369,461	775,945	15·6	14·0	14·8	

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1932—concl'd.

4												5			
per 1,000 of population.															
Hindus.			Muhammadans.			Buddhists.			Other classes.			Total.			
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	No.
20·5	21·4	20·9	18·3	16·4	17·4	...	...	...	...	...	...	20·3	20·8	20·6	1
24·0	22·1	23·0	23·5	18·4	20·7	...	...	...	62·3	41·1	52·2	23·9	21·5	22·8	2
23·5	22·5	23·0	17·8	16·7	17·2	...	...	...	...	6·7	3·6	23·1	22·0	22·6	3
23·3	19·8	21·6	21·3	15·5	18·3	...	...	...	...	...	...	23·1	19·3	21·2	4
22·1	19·2	20·7	17·1	14·0	15·5	...	...	...	14·4	28·4	21·0	21·3	18·3	19·8	5
23·2	20·6	21·9	21·0	16·2	18·5	...	...	...	...	...	...	22·5	20·0	21·5	6
21·1	18·4	19·7	19·4	15·4	17·4	...	...	...	...	...	...	20·9	18·0	19·4	7
19·8	18·6	19·2	18·4	14·9	16·9	...	...	...	0·2	...	0·1	19·6	18·1	18·9	8
20·8	18·2	19·3	16·3	13·2	14·9	..	...	...	6·7	6·3	6·5	19·8	17·6	18·7	9
21·0	19·4	20·2	20·3	17·5	18·9	...	...	...	4·2	5·3	4·7	20·6	18·5	19·6	10
20·3	17·8	19·0	17·7	14·8	16·2	...	...	...	13·7	12·0	12·8	17·2	14·9	16·1	11
27·1	24·9	25·9	23·8	19·8	21·6	...	...	...	57·3	144·3	90·5	26·9	24·6	25·7	12
27·0	27·6	27·3	23·2	21·6	22·4	...	...	...	15·0	13·7	14·4	26·6	27·2	27·0	13
20·6	18·5	19·5	39·8	8·5	27·3	...	...	...	33·1	28·5	30·7	23·9	21·1	22·5	14
25·9	25·2	25·6	20·3	16·5	18·3	...	...	...	...	...	...	25·8	24·3	25·4	15
25·7	22·7	24·2	7·9	5·5	6·8	...	...	...	4·8	4·1	4·6	25·4	22·6	24·0	16
20·7	18·7	19·7	15·8	13·0	14·4	...	...	...	5·2	4·9	5·0	18·8	16·8	17·7	17
11·2	10·2	10·7	20·6	17·9	19·3	...	...	...	56·3	45·4	50·7	23·2	19·8	21·5	18
30·2	27·4	28·8	23·4	23·0	23·2	...	...	...	1·3	1·0	1·1	27·1	24·8	26·0	19
16·4	14·6	15·5	12·7	12·6	12·6	...	...	...	24·4	22·7	23·5	16·5	14·9	15·7	20
11·5	9·8	10·7	4·2	5·6	4·8	56·9	...	38·8	17·9	14·2	15·9	13·9	11·7	12·8	21
22·0	20·2	21·1	19·2	16·0	17·6	16·3	...	9·8	22·0	18·6	20·3	21·6	19·6	20·6	

Annual Form no. VA.—Death rates according to class, urban and rural areas separately in each district of Bihar and Orissa province during the year 1932.

Number.	Districts.				Christians.	Hindus.	Muhammadans.	Buddhists.	Other classes.	Total.
1	2				3	4	5	6	7	8
1	Patna	...	...	{ Urban ...	4.3	13.9	11.8	...	...	13.2
				{ Rural ...	...	21.9	20.3	...	...	21.8
2	Gaya	...	...	{ Urban ...	9.8	31.2	26.5	...	86.0	30.3
				{ Rural ...	14.9	22.7	20.1	...	6.2	22.5
3	Shahabad	...	...	{ Urban ...	2.3	7.0	7.4	...	...	7.0
				{ Rural ...	0.5	23.8	19.8	...	28.0	23.5
4	Saran	...	...	{ Urban ...	...	18.2	15.1	...	...	17.4
				{ Rural ...	8.0	21.6	18.5	...	...	21.2
5	Champaran	...	...	{ Urban ...	23.1	6.3	6.7	...	...	7.1
				{ Rural ...	10.3	20.9	15.9	...	21.6	20.1
6	Muzaffarpur	...	...	{ Urban ...	16.3	17.3	16.1	...	...	17.0
				{ Rural ...	5.9	22.0	18.6	...	...	21.6
7	Darbhanga	...	...	{ Urban ...	13.2	16.9	14.2	...	...	16.2
				{ Rural ...	19.7	19.8	17.6	...	...	19.5
8	Monghyr	...	...	{ Urban ...	0.7	11.8	10.5	...	...	11.4
				{ Rural ...	13.3	19.5	17.0	...	0.1	19.1
9	Bhagalpur	...	...	{ Urban ...	...	9.2	5.3	...	...	8.3
				{ Rural ...	16.7	19.6	15.7	...	6.9	19.2
10	Purnea	...	...	{ Urban ...	3.2	7.4	9.3	...	...	7.9
				{ Rural ...	8.6	20.6	19.1	...	4.9	19.8
11	Santal Parganas	...	...	{ Urban ...	6.6	3.3	2.3	...	6.0	3.2
				{ Rural ...	8.3	19.7	16.7	...	12.8	16.4
12	Cuttack	...	...	{ Urban ...	4.5	11.6	10.2	...	37.0	11.2
				{ Rural ...	6.6	26.4	24.8	...	96.9	26.3
13	Balasore	...	...	{ Urban ...	4.1	18.2	20.0	...	37.9	18.3
				{ Rural ...	15.7	27.4	22.7	...	14.0	27.1
14	Angul	...	...	{ Urban ...	...	...	...	...	...	...
				{ Rural ...	3.2	19.5	27.3	...	30.7	22.5
15	Puri	...	...	{ Urban ...	5.0	28.8	23.2	...	...	28.6
				{ Rural ...	8.2	25.4	18.2	...	...	25.3
16	Sambalpur	...	...	{ Urban ...	...	19.0	6.9	...	...	17.7
				{ Rural ...	9.8	24.3	6.7	...	4.5	24.0
17	Hazaribagh	...	...	{ Urban ...	...	6.8	4.6	...	...	6.1
				{ Rural ...	6.2	20.1	15.2	...	5.0	18.2
18	Ranchi	...	...	{ Urban ...	5.7	5.5	4.6	...	14.8	5.9
				{ Rural ...	17.0	10.9	23.3	...	51.1	22.1
19	Palamau	...	...	{ Urban ...	...	6.5	3.4	...	...	5.8
				{ Rural ...	18.2	29.0	23.8	...	1.1	26.3
20	Manbhum	...	...	{ Urban ...	1.8	12.3	9.3	...	...	11.6
				{ Rural ...	6.0	15.6	12.9	...	23.6	15.9
21	Singhbhum	...	...	{ Urban ...	5.2	8.4	5.5	...	17.4	8.1
				{ Rural ...	6.8	10.8	4.6	65.7	15.9	13.0
	Total for the Province	...	...	{ Urban ...	5.8	13.8	11.3	...	14.9	13.1
				{ Rural ...	15.5	21.3	18.1	11.3	20.4	20.9

APPENDIX I.

Annual Form no. VI.

Annual Form No. VI.—Deaths registered from different causes in the

1	2	3	4	5	5	7	8	9	10	11	12	13	14	15	16	17
No.	Districts and Towns.	Population according to census of 1931.			Births.			Birth rates.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.						
	DISTRICTS EX- CLUDING TOWNS.															
	PATNA DIVISION.															
1	Patna	811,800	776,390	1,588,190	30,622	28,697	60,319	19·3	18·7	38·0	124	1,074	...	20,387	684	756
2	Gaya	1,134,074	1,149,203	2,283,277	52,298	50,571	102,869	22·9	22·1	45·0	246	792	...	38,438	56	23
3	Shahabad	936,948	938,911	1,875,859	37,270	34,934	72,204	19·9	18·6	38·5	1,710	1,968	...	30,709	41	45
	TIEHUT DIVISION.															
4	Saran	1,181,847	1,234,146	2,415,993	44,344	42,441	86,785	18·3	17·6	35·9	120	2,422	699	29,167	410	535
5	Champaran	1,055,771	1,044,430	2,100,201	33,633	32,670	66,303	16·0	15·6	31·6	494	1,427	...	33,721	6	27
6	Muzaffarpur	1,397,930	1,460,854	2,858,784	49,821	47,453	97,274	17·4	16·6	34·0	1 40	642	1,568	51,394	54	22
7	Darbhanga	1,518,105	1,549,704	3,067,809	47,367	44,606	91,973	15·4	14·5	29·9	195	1,118	776	51,627	184	15
	BHAGALPUR DIVI- SION.															
8	Monghyr	1,101,576	1,102,369	2,203,945	40,711	38,361	79,072	18·5	17·4	35·9	39	574	323	32,404	58	25
9	Bhagalpur	1,081,084	1,064,468	2,145,552	33,319	32,248	65,567	15·5	15·0	30·5	467	466	2	35,782	49	49
10	Purnea	1,101,882	1,038,438	2,140,320	29,847	27,384	57,231	13·9	12·8	26·7	413	283	...	39,352	10	4
11	Santal Parganas	998,960	1,003,976	2,002,936	29,310	28,454	57,764	14·6	14·2	28·8	86	481	..	28,986	127	183
	ORISSA DIVISION.															
12	Cuttack	980,266	1,107,885	2,088,151	40,985	38,821	79,806	19·6	18·6	38·2	2,455	1,527	...	24,510	7,071	909
13	Balasore	470,385	502,372	972,757	14,684	14,212	28,896	15·1	14·6	29·7	1,034	199	...	15,118	396	46
14	Angul	108,925	113,811	222,736	4,760	4,569	9,329	21·4	20·5	41·9	1	...	...	4,082	40	14
15	Puri	479,511	518,075	997,586	18,943	17,583	36,526	18·9	17·7	38·6	871	1,028	...	8,246	3,270	939
16	Samhalpur	423,744	442,184	865,928	15,439	14,335	29,774	17·8	16·6	34·4	5	1,301	...	9,275	1,477	1,035
	CHOTA NAGPUR DIVISION.															
17	Hazaribagh	725,619	740,881	1,466,500	20,156	28,224	57,389	19·9	19·2	39·1	25	52	...	21,958	45	26
18	Ranchi	746,329	762,726	1,509,055	25,228	25,587	50,815	16·7	16·9	33·6	456	192	...	27,984	713	71
19	Palamau	403,177	403,519	806,696	17,829	17,462	35,291	22·1	21·6	43·7	103	225	...	17,308	8	10
20	Manbhum	908,615	845,852	1,754,467	27,134	26,312	53,446	15·5	14·9	30·4	108	21	...	24,516	59	84
21	Singbhum	452,415	446,690	899,105	11,742	10,985	22,727	13·0	12·2	25·2	1	3	...	10,239	21	7
	Total for the pro- vince.	18,018,963	18,246,974	36,265,937	634,442	606,909	1,241,351	17·5	16·7	34·2	9,093	15,825	8,368	555,163	14,779	4,915
	TOWNS.															
	PATNA DISTRICT.															
1	Patna City	92,238	67,452	159,690	1,671	1,476	3,147	10·5	9·2	19·7	40	94	...	1,120	80	107
2	Bihar	24,532	22,462	46,994	446	396	842	9·4	8·4	17·8	1	4	...	201	27	22
3	Dinapore	12,347	11,874	24,221	245	200	445	10·1	8·2	18·3	7	7	...	128	21	11
4	Barh	5,179	4,571	9,750	116	96	212	11·9	9·8	21·7	...	1	...	53	4	7
5	Rhagole	4,119	3,293	7,412	76	53	129	10·3	7·1	17·4	2	9	...	43	5	9
	GAYA DISTRICT.															
6	Gaya	50,625	37,380	88,005	1,364	1,224	2,588	15·5	13·9	29·4	52	124	...	1,618	118	94
7	Tikari	26,887	2,794	5,481	132	112	244	24·1	20·4	44·5	...	1	...	101	2	...
8	Daudnagar	6,257	5,442	11,699	235	185	390	17·5	15·8	33·3	1	1	...	124	2	...

DIX I—contd.

districts and towns of Bihar and Orissa Province, during the year 1932—contd.

11						12	13			14														15
Injuries.						All other causes.	Total deaths from all causes.			Ratio of deaths per 1,000 of population.														No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.		Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.						
Male.	Female.																	Male.	Female.	Total.	Male.	Female.	Total.		Male.	Female.	Total.	Mean of previous five years.
79	119	180	191	3	572	11,058	17,666	16,889	34,555	0.1	0.6	...	12.8	0.4	0.5	0.3	6.9	21.7	21.7	21.8	25.9	1		
31	53	132	260	2	478	11,320	26,939	24,414	51,353	0.1	0.3	...	16.8	0.02	0.01	0.2	4.9	23.7	21.2	22.5	28.2	2		
38	50	139	174	7	408	9,297	22,638	21,560	44,198	0.9	1.0	...	16.4	0.02	0.02	0.2	5.0	24.1	22.9	23.5	27.5	3		
36	89	334	582	2	1,043	16,974	27,546	23,834	51,380	0.05	1.0	0.3	12.1	0.2	0.2	0.4	7.0	23.3	18.5	21.2	25.1	4		
15	15	140	439	3	612	5,948	22,834	19,401	42,235	0.2	0.6	...	16.0	0.002	0.01	0.3	2.8	21.6	18.6	20.1	23.9	5		
17	26	437	625	10	1,115	6,809	32,394	29,350	61,744	0.04	0.2	0.5	18.0	0.01	0.007	0.4	2.4	23.2	20.1	21.6	29.1	6		
17	16	378	526	18	955	5,023	31,986	27,907	59,893	0.08	0.3	0.2	11.8	0.05	0.004	0.3	1.6	21.0	18.0	19.5	26.9	7		
18	15	63	336	7	459	8,378	21,970	20,290	42,260	0.02	0.3	0.1	14.7	0.02	0.01	0.2	3.8	19.9	18.4	19.1	27.1	8		
43	28	173	348	4	596	3,739	22,026	19,124	41,150	0.2	0.3	0.001	16.7	0.02	0.02	0.3	1.7	20.4	17.9	19.2	23.9	9		
39	50	37	347	3	376	2,088	23,101	19,425	42,526	0.2	0.1	...	18.3	0.005	0.002	0.2	0.9	20.9	18.7	19.2	22.8	10		
52	39	54	125	8	278	2,668	17,525	15,284	32,809	0.04	0.2	...	14.5	0.06	0.09	0.1	1.3	17.6	15.3	16.4	18.5	11		
93	343	394	235	44	1,109	17,414	27,170	27,915	55,085	1.1	0.7	...	11.7	3.4	0.5	0.5	8.3	27.7	25.2	26.3	30.6	12		
50	112	242	151	8	563	9,014	12,636	13,734	26,370	1.1	0.2	...	15.5	0.4	0.04	0.6	9.3	26.8	27.3	27.1	30.5	13		
8	23	54	69	2	156	713	2,601	2,405	5,006	0.004	...	...	18.3	0.2	0.06	0.7	3.2	33.9	21.1	22.5	25.4	14
30	63	230	102	5	430	10,429	12,372	12,841	25,213	0.8	1.0	...	8.3	3.3	0.9	0.4	10.4	25.8	24.8	25.3	27.6	15		
18	20	151	53	7	248	7,517	10,830	10,028	28,858	0.005	1.5	...	10.7	1.7	1.2	0.3	8.7	25.5	22.7	24.0	25.6	16		
89	84	123	102	2	391	4,177	13,957	12,717	26,674	0.01	0.63	...	14.9	0.03	0.02	0.2	2.8	19.2	17.2	18.2	22.0	17		
27	26	139	126	4	322	3,636	17,835	15,539	33,374	0.3	0.1	...	18.5	0.4	0.04	0.2	2.4	23.8	20.3	23.1	19.8	18		
26	29	86	101	1	243	3,233	11,081	10,109	21,190	0.1	0.3	...	21.5	0.01	0.01	0.3	4.0	27.5	25.0	26.3	29.1	19		
20	16	127	66	4	253	2,826	15,155	12,712	27,867	0.05	0.01	...	14.0	0.03	0.04	0.1	1.6	16.7	15.0	15.9	15.4	20		
25	33	44	103	2	206	1,253	6,433	5,297	11,730	0.001	0.003	...	11.3	0.02	0.007	0.2	1.3	14.2	11.8	13.0	13.9	21		
762	1,249	3,677	4,979	146	10,813	143,514	396,695	330,775	757,470	0.2	0.4	0.09	15.3	0.4	0.1	0.3	3.9	22.0	19.8	20.9	24.9			
7	5	57	8	2	79	772	1,204	1,088	2,292	0.2	0.6	...	7.0	0.5	0.6	0.5	4.8	13.1	16.1	14.3	16.9	1		
...	2	13	...	...	15	109	196	183	379	0.2	0.1	...	4.3	0.6	0.5	0.3	2.3	7.9	8.1	8.1	13.6	2
1	...	4	1	...	6	92	124	148	272	0.3	0.3	...	5.3	0.9	0.4	0.2	3.8	10.0	12.4	11.2	25.6	3		
...	...	4	...	...	4	60	65	64	129	...	0.1	...	5.4	0.4	0.7	0.4	6.2	12.5	14.0	13.2	23.0	4
...	...	3	...	...	2	21	46	45	91	0.3	1.2	...	5.8	0.6	1.3	0.3	2.8	11.1	13.6	12.2	19.7	5
1	...	105	3	...	109	775	1,518	1,372	28,900	0.6	1.4	...	18.4	1.3	1.1	1.2	8.8	30.0	30.7	32.8	31.4	6		
...	...	...	...	...	...	10	61	53	114	...	0.2	...	18.4	0.3	...	...	1.8	22.7	18.9	20.8	25.0	7
...	1	3	...	...	4	49	94	87	181	0.08	0.08	...	10.6	0.2	...	0.3	4.2	15.0	16.0	15.5	16.7	8

Annual Form No. VI.—Deaths registered from different causes in the

1	2	3			4			5			6	7	8	9	10	11
No.	Districts and Towns.	Population according to census of 1931.			Births.			Birth rate.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.						
	TOWNS—contd.															
	SHAHABAD DISTRICT.															
9	Arrah ...	26,625	22,237	48,922	363	288	651	7·4	5·9	13·3	...	6	1	190	2	1
10	Buxar ...	7,430	6,019	13,449	223	167	390	16·6	12·4	29·0	12	9	...	95	...	5
11	Dumraon ...	7,602	6,819	14,421	155	168	323	10·7	11·7	22·4	2	3	...	27	1	1
12	Jagadispur ...	4,791	4,870	9,661	142	129	271	14·7	13·4	28·1	...	1	...	48	4	6
13	Sasaram ...	12,473	12,703	25,175	310	309	619	12·3	13·3	24·6	10	5	...	134	15	13
14	Bhabhua ...	3,220	2,782	6,002	110	85	195	18·3	14·2	32·5	...	7	...	21	...	...
	SARAN DISTRICT.															
15	Chapra... ..	25,934	21,514	47,448	627	495	1,122	13·2	10·4	23·6	...	50	...	377	52	40
16	Revelganj ...	4,297	4,525	8,812	204	195	399	23·1	22·2	45·3	...	3	...	130	5	5
17	Siwan	7,981	6,234	14,215	381	356	737	26·8	25·0	51·8	...	13	...	107	3	4
	CHAMPARAN DISTRICT.															
18	Bettiah	14,659	13,282	27,941	260	202	462	9·3	7·2	16·5	...	2	...	104	...	...
19	Motihari	10,526	7,019	17,545	163	174	337	9·3	9·9	19·2	...	20	...	124	...	...
	MUZAFFARPUR DISTRICT.															
20	Muzaffarpur ...	25,050	17,999	43,045	622	603	1,225	14·4	14·0	28·4	2	2	3	267	41	34
21	Sitamarhi	6,255	4,446	10,701	168	151	319	15·7	14·1	29·8	...	26	...	103	14	8
22	Hajipur	9,936	9,363	19,299	372	292	664	10·3	15·1	34·4	...	19	1	148	32	21
23	Lalganj... ..	4,676	4,516	9,192	144	149	293	15·6	16·2	31·8	...	...	1	100	13	14
	DARBHANGA DISTRICT.															
24	Darbhanga	32,274	28,402	60,676	1,012	934	1,946	16·7	15·4	32·1	2	71	...	377	29	2
25	Roserah	4,533	4,336	8,869	132	128	260	14·9	14·4	29·3	...	2	...	52	5	1
26	Samastipur	6,101	3,790	9,891	109	90	199	11·0	9·1	20·1	1	1	...	29	2	2
27	Madhubani	9,946	8,843	18,789	240	200	440	12·8	10·6	23·4	...	28	...	80	5	3
	MONGHYR DISTRICT.															
28	Monghyr	27,843	25,020	52,863	810	624	1,434	15·3	11·8	27·1	5	6	...	269	24	32
29	Jamalpur	16,378	13,968	30,346	476	494	970	15·7	16·3	32·0	...	3	...	200	...	5
	BHAGALPUR DISTRICT.															
30	Bhagalpur	46,868	36,979	83,847	703	656	1,359	8·4	7·8	16·2	...	14	...	429	25	21
31	Colgong	2,632	2,601	5,233	87	78	165	16·6	14·9	31·5	...	...	...	64	1	1
	PURNEA DISTRICT.															
32	Purnea	9,255	6,219	15,474	101	92	193	6·5	5·9	12·4	...	...	...	158	1	1
33	Kishenganj	5,817	3,129	8,946	72	52	124	8·0	5·8	13·8	...	...	...	63	...	3
34	Katlihar	9,014	6,850	15,864	75	47	122	14·7	2·9	7·6	...	2	...	42	2	1
35	Forbesganj	3,713	2,226	5,939	75	58	133	12·6	9·8	22·4	...	3	...	64	8	6

11						12	13			14										15		
Injuries.						All other causes,	Total deaths from all causes.			Ratio of deaths per 1,000 of population.										No.		
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.		Male.	Female.	Total.	Cholera,	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.				
Male.	Female.																	Male.	Female.		Total.	Mean of previous five years.
...	1	...	1	49	135	124	259	...	0'1	0'02	4'1	0'04	0'02	0'02	1'0	5'0	5'5	5'3	9'8	9
...	...	4	...	...	4	37	97	65	162	0'9	0'6	...	7'0	...	0'4	0'3	2'7	13'0	10'8	12'0	11'2	10
...	...	3	...	...	3	12	24	25	49	0'1	0'2	...	1'9	0'06	0'06	0'2	0'8	3'1	3'6	3'4	6'5	11
...	...	1	2	...	3	18	45	35	80	...	0'1	...	5'0	0'4	0'6	0'3	1'8	9'4	7'2	8'3	15'4	12
2	2	2	...	1	7	43	110	108	227	0'4	0'2	...	5'3	0'6	0'5	0'3	1'7	9'5	8'5	9'0	12'8	13
...	...	2	1	1	4	13	26	19	45	...	1'2	...	2'3	...	...	0'6	2'2	8'1	6'8	7'5	17'3	14
...
5	8	40	...	...	53	265	450	378	837	...	1'1	...	7'9	1'1	0'8	1'1	5'5	17'7	17'6	17'6	20'3	15
...	...	2	3	...	5	33	85	96	181	...	0'3	...	14'7	0'6	0'6	0'6	3'7	19'8	21'2	20'5	24'5	16
...	1	...	1	82	108	102	210	...	0'9	...	7'5	0'2	0'3	0'1	5'7	13'5	16'3	14'7	15'0	17
...
...	...	1	3	...	4	33	101	80	181	...	1'1	...	7'1	...	...	0'3	1'9	9'5	11'4	10'3	13'6	18
...
1	...	55	3	1	60	240	347	302	649	0'04	0'04	0'06	6'2	0'9	0'8	1'4	5'6	13'8	16'8	15'1	19'6	20
1	...	15	...	...	16	36	126	77	203	...	2'4	...	16	1'3	0'1	1'5	3'3	20'1	17'3	19'0	20'6	21
...	...	18	1	1	20	117	185	173	358	...	1'0	0'05	7'6	1'6	1'1	1'0	6'0	18'6	18'5	18'5	25'6	22
...	...	2	...	1	3	62	97	96	193	...	...	0'1	10'9	1'4	1'5	0'3	6'7	20'7	21'2	21'0	24'0	23
1	1	5	3	...	10	703	629	575	1,204	0'03	1'2	...	6'2	0'5	0'2	0'1	11'6	19'5	20'2	19'8	25'9	24
...	...	1	3	...	4	46	59	51	110	...	0'2	...	5'8	0'5	0'1	0'4	5'2	13'0	11'7	12'4	17'6	25
...	...	2	...	...	2	56	54	39	93	0'1	0'1	...	2'9	0'2	0'2	0'2	5'6	8'8	10'3	9'4	15'3	26
...	...	3	...	...	3	66	90	95	185	...	1'5	...	4'2	0'2	0'1	0'1	3'5	9'0	10'7	9'8	18'0	27
...	...	3	...	...	3	249	328	260	588	0'09	0'1	...	5'1	0'4	0'6	0'05	4'7	11'8	10'4	11'1	19'2	28
...	1	...	1	152	210	151	361	...	0'1	...	6'6	...	0'1	0'03	5'0	12'8				

Annual Form no. VI.—Deaths registered from different causes in the

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
No.	District and Town.	Population according to census of 1931.			Births.			Birth rate.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.						
	TOWNS—concd.															
	SANTAL PARGAEEAS DISTRICT.															
36	Sahibganj ...	8,530	7,353	15,883	56	43	99	3·5	2·7	6·2	...	...	...	25	...	...
37	Deoghar ...	8,117	6,100	14,217	118	112	230	8·3	7·9	16·2	...	5	...	30	1	1
38	Dumka ...	5,317	4,154	9,471	36	35	71	3·8	3·7	7·5	...	...	...	29	2	...
39	Madhupur ...	4,997	3,968	8,965	37	28	65	4·1	3·1	7·2	1	...	...	14	2	...
	CUTTACK DISTRICT.															
40	Cuttack... ..	36,357	28,906	65,263	521	437	958	8·0	6·7	14·7	18	1	...	161	47	27
41	Kendrapara ...	6,237	6,383	12,620	165	176	341	13·1	13·9	27·0	21	...	...	175	42	2
42	Jajpur	5,274	5,399	10,673	111	120	231	10·4	11·2	21·6	3	...	...	65	16	7
	BALASORE DISTRICT.															
43	Balasore	10,133	7,710	17,843	148	175	323	8·3	9·8	18·1	18	...	...	156	20	8
	PURI DISTRICT.															
44	Puri	20,703	16,865	37,568	312	316	628	8·3	8·4	16·7	37	7	...	396	192	66
	SAMBALPUR DISTRICT.															
45	Sambalpur	7,716	7,301	15,017	224	167	391	14·9	11·1	26·0	...	14	...	100	35	27
	HAZARIBAGH DISTRICT.															
46	Hazaribagh	10,903	10,074	20,977	198	206	404	9·4	9·8	19·2	...	...	...	114	1	1
47	Chatra	4,312	4,446	8,758	139	173	312	15·9	19·7	35·6	...	2	...	53	...	...
48	Giridih	11,122	10,000	21,122	119	132	251	5·6	6·2	11·8	...	1	...	66	7	2
	RANCHI DISTRICT.															
49	Ranchi	26,918	23,599	50,517	323	256	579	6·4	5·0	11·4	3	55	...	135	8	5
50	Lohardaga	3,816	3,761	7,577	109	101	210	14·4	13·3	27·7	15	1	...	48	7	1
	PALAMAU DISTRICT.															
51	Daltonganj	6,601	5,459	12,040	141	94	235	11·7	7·8	19·5	...	...	...	47	1	2
	MAEBHUM DISTRICT.															
52	Purulia	14,388	11,586	25,974	249	216	495	9·6	9·4	19·0	...	...	...	213	...	2
53	Ragbunathpur ..	3,654	3,485	7,139	75	83	158	10·5	11·6	22·1	...	...	...	88	...	...
54	Jhalda	3,470	3,454	6,924	87	87	174	12·5	12·5	25·0	1	...	...	74	...	...
55	Dhanbad	9,882	6,476	16,356	184	131	315	11·2	8·0	19·2	1	1	...	38	5	11
	SINGHBHUM DISTRICT.															
56	Chaibassa	5,716	5,069	10,785	178	170	348	16·5	15·7	32·2	...	...	...	87	7	3
57	Chakradharpur ..	6,215	4,976	11,191	71	62	133	6·3	5·5	11·8	...	...	...	51	...	1
58	Jugsalai	5,075	3,646	8,721	135	128	253	14·4	14·6	29·0	...	...	...	39	...	...
(a)	Total for all Towns	769,266	632,156	1,401,422	16,117	14,436	30,553	11·5	10·3	21·8	255	624	6	9,403	936	656
(a)	Total for the whole Province.	18,788,229	18,879,130	37,667,359	650,559	631,345	1,271,904	17·3	16·5	33·8	9,348	16,449	3,374	564,566	15,715	5,571

(a) Excluding cantonment population.

DIX I—contd.

districts and towns of Bihar and Orissa Province, during the year 1932—concl'd.

11						12	13			14														15
Injuries.						All other causes.	Total deaths from all causes.			Ratio of deaths per 1,000 of population.														No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.		Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Feyers.	Dysentery and diarrea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.						
Male.	Female.																	Male.	Female.	Total.	Mean of prisons five years.			
...	...	...	1	...	1	4	17	13	30	...	...	...	1.6	...	..	0.06	0.2	1.9	1.7	1.9	8.3	36
...	...	...	...	...	...	19	26	30	56	...	0.3	...	2.1	0.1	0.1	...	1.3	3.2	4.9	3.9	5.9	37
...	...	1	...	...	1	7	22	17	39	...	...	...	3.1	0.2	...	0.1	0.7	4.1	4.1	4.1	6.3	38
...	...	...	...	...	...	15	22	10	32	0.1	...	...	1.6	0.2	...	...	1.7	4.4	2.5	3.6	5.1	39
4	...	14	1	1	20	197	301	170	471	0.3	0.01	...	2.4	0.7	0.4	0.3	3.0	8.3	5.9	7.2	9.8	40		
...	2	2	1	...	5	137	179	263	382	1.6	...	...	13.8	3.3	0.1	0.4	10.8	28.7	31.8	30.2	34.1	41
...	1	1	...	1	3	47	69	72	141	0.3	...	...	6.1	1.5	0.6	0.3	4.4	13.1	13.3	13.2	21.1	42
2	...	8	...	...	10	115	159	163	327	1.0	...	...	8.7	1.1	0.4	0.6	6.5	15.6	21.7	18.3	17.6	43
5	5	12	2	...	24	353	546	520	1,075	1.0	0.2	...	10.5	5.1	1.7	0.6	9.3	26.3	31.4	28.6	34.0	44		
1	1	4	1	...	7	83	149	117	266	...	0.9	...	6.6	2.3	1.8	0.4	5.5	19.3	16.0	17.7	24.8	45		
1	...	...	...	...	1	17	65	69	134	...	...	...	5.4	0.04	0.04	0.04	0.8	5.9	6.8	6.4	8.9	46
...	...	2	...	...	2	21	37	41	78	...	0.2	...	6.0	...	...	0.2	2.4	8.6	9.2	8.9	22.7	47
...	...	...	...	...	...	20	49	47	97	...	0.04	...	3.1	0.3	0.1	..	0.9	4.4	4.7	4.5	8.1	48
...	...	2	1	...	3	30	122	117	239	0.05	1.1	...	2.6	0.1	0.1	0.5	0.6	4.5	4.9	4.7	4.2	49		
...	...	1	...	...	1	31	46	58	104	1.9	0.1	...	6.2	0.9	0.1	0.1	4.1	12.1	15.4	13.7	15.4	50
3	...	...	...	...	3	17	44	26	70	...	...	...	3.9	0.08	0.2	0.2	1.4	6.6	4.8	5.8	5.6	51
...	...	1	...	...	1	45	155	106	261	...	...	...	8.2	...	0.7	0.03	1.7	10.8	9.1	10.0	7.8	52
...	...	...	...	...	...	1	48	41	89	...	...	...	12.3	...	...	...	0.1	13.1	11.8	12.5	22.3	53
...	...	...	...	...	...	7	47	35	82	0.1	...	...	10.7	...	...	...	1.0	13.5	10.1	11.8	11.7	54
1	...	13	1	...	15	151	137	85	222	0.06	0.06	...	2.3	0.3	0.7	0.9	9.2	13.9	13.1	13.6	2.7	55		
...	...	6	...	...	6	39	80	62	142	...	...	...	8.0	0.6	0.2	0.5	3.6	13.9	12.2	13.1	15.2	56
...	...	...	...	...	...	11	31	32	63	...	...	...	4.5	...	0.03	...	0.9	4.9	6.4	5.6	6.1	57
...	...	...	...	...	...	6	22	23	45	...	...	...	4.4	...	...	...	0.6	4.3	6.3	5.1	8.4	58
41	29	418	44	11	543	5,793	9,677	8,539	18,216	0.2	0.64	0.004	6.7	0.7	0.5	0.4	4.1	12.6	13.5	13.0	15.9	...		
803	1,278	4,095	5,023	157	11,356	149,307	406,372	369,314	775,683	0.2	0.4	0.09	15.0	0.4	0.1	0.3	4.0	21.6	19.6	20.6	24.6	..		

APPENDIX TO ANNUAL

Births and Deaths registered in the cantonment of the

1	2	3	4	5	6	7	8	9	10							
No.	Name of cantonment.	Indian non-military population according to Census of 1931.			Births.			Birth-rate.			Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.						
1	Dinapur	5,909	4,308	10,217	201	191	392	19·7	18·7	38·4	...	17	...	100	12	11

FORM No. VI.

Bihar and Orissa Province, during the year 1932.

11							12	13			14											15
Injuries.							All other causes.	Total deaths from all causes.			Ratio of deaths per 1,000 of population.								All causes.			No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.	Male.		Female.	Total.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Male.	Female.	Total.		
Male.	Female.																					
..	..	3	1	..	4	115	112	147	259	..	1.6	..	9.8	1.2	1.1	0.4	11.2	18.9	34.0	25.3	1	

Annual Form No. VII.—Deaths registered from Cholera in the

1	2	3	4	5								
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.							
PATNA DIVISION.												
1	Patna	19	17	2,315	150	...	1	2	17	16	5	29
2	Gaya	16	12	12,180	212	3	...	5	2	7	20	42
3	Shahabad	17	15	6,639	244	2	1	3	1	95	269	475
	Total	52	44	21,184	606	5	2	10	20	118	294	546
TIRHUT DIVISION.												
4	Saran	13	10	4,807	26	...	...	1	9	8	22	8
5	Champaran	11	7	4,421	77	...	...	...	5	6	1	47
6	Muzaffarpur	14	11	4,561	103	...	...	25	55	24	8	...
7	Darbhanga	14	10	3,135	160	...	...	16	23	13	20	29
	Total	52	38	16,924	366	...	...	42	92	51	51	84
BHAGALPUR DIVISION.												
8	Monghyr	13	6	5,084	40	...	1	8	9	13	6	3
9	Bhagalpur	14	11	4,198	87	81	25	28	16	3	26	25
10	Purnea	17	9	4,160	99	63	4	4	5	1	...	...
11	Santal Parganas	10	6	5,934	24	21	4	2	3	2	1	1
	Total	54	32	19,376	250	165	34	42	33	19	33	29
ORISSA DIVISION.												
12	Cuttack	13	13	9,686	618	180	285	181	56	73	69	149
13	Balasore	10	9	5,701	300	75	24	50	428	205	13	62
14	Angul	2	1	1,748	1	...	...	...	...	...	...	...
15	Puri	6	6	4,530	217	1	5	21	83	210	181	224
16	Sambalpur	23	2	2,457	5	...	1	...	...	3	...	...
	Total	54	31	24,122	1,141	256	315	252	567	491	263	435
CHOTA NAGPUR DIVISION.												
17	Hazaribagh	21	9	6,087	12	...	5	2	3	3	8	3
18	Ranchi	32	21	4,118	54	...	...	...	...	11	82	77
19	Palamau	10	7	3,862	47	...	...	...	4	10	4	2
20	Manbhum	35	14	6,509	47	...	9	5	35	6	18	17
21	Singhbhum	14	1	3,222	1	...	...	...	1	...	...	...
	Total	112	52	23,798	161	...	14	7	43	30	112	99
	Total for the Province	324	197	105,404	2,524	426	365	353	755	709	753	1,193

DIX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1932.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
57	28	11	8	...	81	93	174	0·1	0·1	0·1	2·4	1
101	53	50	7	9	150	149	299	0·1	0·1	0·1	3·1	2
672	196	12	5	3	929	805	1,734	0·9	0·8	0·8	2·7	3
830	277	73	20	12	1,160	1,047	2,207	0·4	0·3	0·3	2·7	
17	36	13	6	...	68	52	120	0·5	0·04	0·05	1·6	4
250	173	12	...	...	262	232	494	0·2	0·2	0·2	2·6	5
12	14	4	...	...	97	45	142	0·06	0·03	0·04	4·2	6
48	28	18	1	2	112	86	198	0·07	0·04	0·06	4·3	7
327	251	47	7	2	539	415	954	0·1	0·08	0·09	3·3	
2	...	...	2	..	27	17	44	0·02	0·01	0·02	3·1	8
11	13	7	184	48	245	222	467	0·2	0·2	0·2	2·8	9
...	...	56	51	229	234	179	413	0·2	0·2	0·2	1·5	10
...	...	4	5	44	50	37	87	0·05	0·04	0·04	0·6	11
13	13	67	242	321	556	455	1,011	0·1	0·1	0·1	2·1	
370	212	268	325	329	1,189	1,308	2,497	1·1	1·1	1·1	2·1	12
21	2	22	60	90	525	527	1,052	1·1	1·0	1·1	2·2	13
1	...	...	...	...	...	1	1	...	0·009	0·004	0·004	14
109	13	19	36	6	444	464	908	0·9	0·9	0·9	2·0	15
...	...	...	1	...	3	2	5	0·006	0·004	0·005	0·7	16
501	227	309	422	425	2,161	2,302	4,463	0·8	0·8	0·8	1·8	
...	...	...	1	...	14	11	25	0·02	0·01	0·01	1·2	17
147	126	23	8	...	276	198	474	0·3	0·2	0·3	0·2	18
10	11	55	7	...	60	43	103	0·1	0·1	0·1	1·8	19
19	1	...	...	...	53	57	110	0·05	0·06	0·06	0·4	20
...	...	...	...	...	1	...	1	0·002	...	0·001	0·09	21
176	138	78	16	...	404	309	713	0·1	0·09	0·1	0·7	
1,847	906	574	707	760	4,820	4,528	9,348	0·2	0·2	0·2	2·2	

Annual Form No. VIII.--Deaths registered from small-pox in the

1	2	3	4	5							
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.						
PATNA DIVISION.											
1	Patna	19	19	2,315	350	51	88	156	189	218	234
2	Gaya	16	16	12,180	453	44	44	102	188	73	83
3	Shahabad	17	17	6,689	462	68	130	183	309	329	339
	Total	52	52	21,184	1,265	163	262	441	686	620	656
TIRHUT DIVISION.											
4	Saran	13	13	4,807	514	56	77	188	286	368	544
5	Champaran	11	11	4,421	404	31	12	38	95	358	462
6	Muzaffarpur	14	13	4,561	154	12	10	23	85	182	147
7	Darbhanga	14	14	3,135	120	23	74	144	138	245	221
	Total	52	51	16,924	1,192	122	173	393	604	1,153	1,374
BHAGALPUR DIVISION.											
8	Monghyr	13	13	5,084	173	7	18	22	74	52	91
9	Bhagalpur	14	12	4,198	91	8	21	36	73	30	46
10	Purnea	17	12	4,160	40	9	5	11	32	95	37
11	Santal Parganas	10	7	5,934	50	5	15	49	53	70	173
	Total	54	44	19,376	354	29	59	118	232	247	347
ORISSA DIVISION.											
12	Cuttack	13	11	9,686	540	68	107	181	178	193	129
13	Balasore	10	8	5,701	175	1	11	21	31	38	19
14	Angul	2	...	1,748	...	...	...	...	...	...	...
15	Puri	6	6	4,530	281	25	47	97	79	59	53
16	Sambalpur	23	20	2,457	253	117	150	139	123	188	215
	Total	54	45	24,122	1,249	211	315	438	411	478	416
CHOTA NAGPUR DIVISION.											
17	Hazaribagh	21	11	6,087	30	1	1	...	1	3	6
18	Ranchi	32	19	4,118	115	...	7	6	13	29	58
19	Palamau	10	8	3,862	113	8	24	22	33	28	49
20	Manbhum	35	11	6,509	28	...	...	1	2	1	10
21	Singhbhum	14	2	3,222	1	1	1	1	...	...	...
	Total	112	51	23,798	287	10	33	30	49	61	123
	Total for the Province	324	243	105,404	4,347	535	842	1,420	1,932	2,559	2,916

DIX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1932.

						6			7		8			9	10
July.	August.	September.	October.	November.	December.	Total.			Number of deaths among children.		Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Male.	Female.	Total.	Under 1 year.	One year and under 10 years.	Male.	Female.	Total.		
128	56	21	12	23	30	625	581	1,206	163	272	0·6	0·6	0·6	0·5	1
67	40	42	23	68	194	462	456	918	52	146	0·4	0·4	0·4	0·6	2
282	115	56	25	51	132	1,037	982	2,019	58	108	1·0	1·0	1·0	0·6	3
477	211	119	60	142	356	2,124	2,019	4,143	273	526	0·7	0·6	0·7	0·6	
365	133	87	46	88	260	1,283	1,215	2,498	71	253	1·0	1·0	1·0	0·3	4
218	79	44	22	24	66	765	684	1,449	55	87	0·7	0·6	0·7	0·1	5
83	35	18	19	29	46	345	344	689	307	462	0·2	0·2	0·2	0·2	6
116	84	35	17	52	71	624	596	1,220	78	199	0·4	0·5	0·4	0·2	7
782	331	184	104	193	443	3,017	2,839	5,856	511	1,001	0·6	0·5	0·5	0·2	
105	22	28	21	35	108	295	288	583	96	222	0·2	0·2	0·2	0·5	8
54	22	72	25	32	61	236	244	480	...	...	0·2	0·2	0·2	0·4	9
6	17	7	4	24	41	164	124	288	2	10	0·1	0·1	0·1	0·4	10
51	21	16	8	18	7	261	225	486	22	12	0·1	0·2	0·2	0·5	11
216	82	123	58	109	217	956	881	1,837	120	244	0·2	0·2	0·2	0·4	
123	160	81	55	87	166	810	718	1,528	111	332	0·8	0·6	0·7	0·6	12
22	20	10	6	7	13	99	100	199	3	10	0·2	0·2	0·2	0·6	13
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·02	14
53	96	90	105	165	166	487	548	1,035	123	426	0·9	1·0	1·0	0·3	15
153	107	36	20	18	49	694	621	1,315	119	114	1·6	1·4	1·5	0·4	16
351	383	217	186	277	394	2,090	1,987	4,077	356	882	0·8	0·7	0·8	0·5	
6	9	6	1	3	18	26	29	55	1	1	0·03	0·03	0·03	0·3	17
29	...	12	13	31	50	134	114	248	...	...	0·2	0·1	0·2	0·2	18
35	3	4	3	3	13	110	115	225	...	...	0·3	0·3	0·3	0·7	19
4	3	1	...	...	...	11	11	22	...	...	0·01	0·01	0·01	0·09	20
...	...	...	...	...	...	...	3	3	...	...	...	0·006	0·003	0·1	21
74	15	23	17	37	81	281	272	553	1	1	0·08	0·08	0·08	0·2	
1,900	1,022	666	425	758	1,491	8,468	7,998	16,466	1,261	2,654	0·4	0·4	0·4	0·4	

Annual Form No. IX.—Deaths registered from Fevers in the districts

1	2	3	4	5									
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.								
PATNA DIVISION.													
1	Patna	19	19	2,315	2,315	1,470	1,279	1,362	1,501	1,824	2,537	2,115	
2	Gaya	16	16	12,180	11,528	2,586	2,015	2,299	2,384	3,116	4,795	4,030	
3	Shahabad	17	17	6,689	5,655	1,930	1,748	1,883	1,946	2,228	3,872	3,322	
	Total	52	52	21,184	19,498	5,986	5,042	5,544	5,831	7,168	11,204	9,467	
TIRHUT DIVISION.													
4	Saran	13	13	4,807	4,384	2,237	1,869	2,006	2,248	2,837	3,182	3,348	
5	Champaran	11	11	4,421	3,766	3,105	2,267	2,473	2,725	3,338	3,153	3,020	
6	Muzaffarpur	14	14	4,561	4,357	5,007	4,028	3,882	4,517	5,265	4,805	4,364	
7	Darbhanga	14	14	3,135	3,135	4,367	4,481	4,537	4,485	5,814	4,492	4,359	
	Total	52	52	16,924	15,642	14,716	12,645	12,898	13,975	17,254	15,632	15,091	
BHAGALPUR DIVISION.													
8	Monghyr	13	13	5,084	4,737	2,821	2,122	2,373	2,449	2,524	2,529	2,439	
9	Bhagalpur	14	14	4,198	3,378	3,661	2,385	2,520	2,738	2,987	2,387	2,449	
10	Purnea	17	17	4,160	4,160	3,724	3,069	3,408	3,486	3,781	3,267	2,855	
11	Santal Parganas	10	10	5,934	5,117	2,287	2,040	2,161	2,333	2,289	2,300	2,113	
	Total	54	54	19,376	17,392	12,493	9,616	10,462	11,006	11,581	10,483	9,856	
ORISSA DIVISION.													
12	Cuttack	13	13	2,686	5,726	2,368	2,256	2,263	1,815	1,774	1,347	1,451	
13	Balasore	10	10	5,701	4,319	1,576	1,502	1,302	966	852	608	889	
14	Angul	2	2	1,748	1,093	553	333	319	368	366	316	249	
15	Puri	6	6	4,530	3,402	962	871	800	787	649	545	527	
16	Sambalpur	23	23	2,457	1,753	661	782	763	765	838	626	514	
	Total	54	54	24,122	16,233	5,920	5,744	5,447	4,701	4,479	3,442	3,630	
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	21	21	6,087	6,087	1,930	1,469	1,432	1,723	1,875	1,773	1,658	
18	Ranchi	32	32	4,118	3,625	1,670	2,106	2,106	2,093	2,301	2,040	1,823	
19	Palamau	10	10	3,862	3,451	1,352	1,051	1,112	1,239	1,276	1,613	1,357	
20	Manbhum	35	35	6,509	5,728	1,798	1,605	1,802	2,050	2,171	1,927	1,929	
21	Singhbhum	14	14	3,222	2,410	838	865	832	858	829	681	777	
	Total	112	112	23,798	21,301	7,588	7,096	7,284	7,963	8,452	8,034	7,544	
	Total for the Province	324	324	105,404	90,126	46,703	40,143	41,635	43,476	48,934	48,795	45,588	

DIX 1—contd.

of Bihar and Orissa Province, during each month of the year 1932.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
2,350	2,154	1,957	1,844	1,539	10,927	11,005	21,932	11·4	12·3	11·9	12·7	1
4,360	4,744	3,842	3,281	2,829	20,866	19,415	40,281	17·5	16·2	16·8	18·9	2
3,303	3,345	3,042	2,418	2,196	15,682	15,551	31,233	15·7	15·6	15·6	18·0	3
10,013	10,243	8,841	7,543	6,564	47,475	45,971	93,446	15·1	14·9	15·0	16·7	
3,149	2,764	2,079	2,005	2,057	16,395	13,386	29,781	13·4	10·6	11·9	13·4	4
2,869	2,729	2,458	2,976	2,836	18,308	15,641	33,949	16·9	14·7	15·8	16·9	5
3,963	3,704	4,299	4,244	3,934	27,515	24,497	52,012	19·0	16·3	17·7	20·6	6
3,989	3,913	3,560	4,115	4,053	28,010	24,155	52,165	17·8	15·1	16·5	18·9	7
13,970	13,110	12,396	13,340	12,880	90,228	77,679	167,907	17·0	14·3	15·6	17·7	
2,696	3,097	2,996	3,502	3,325	17,010	15,863	32,873	14·8	13·9	14·4	18·2	8
2,359	3,278	3,171	3,944	4,396	19,412	16,863	36,275	17·2	15·3	16·2	18·0	9
2,340	2,957	2,801	3,459	4,532	21,486	18,193	39,679	19·0	17·2	18·1	19·2	10
2,719	3,171	2,669	2,456	2,546	15,491	13,593	29,084	15·1	13·3	14·2	14·9	11
10,114	12,503	11,637	13,361	14,799	73,399	64,512	137,911	16·6	14·9	15·7	17·6	
2,002	1,462	1,956	2,670	3,547	11,854	13,057	24,911	11·5	11·3	11·4	13·4	12
1,292	1,020	1,344	1,807	2,116	7,271	8,003	15,274	15·1	15·7	15·4	16·0	13
339	390	351	316	382	2,101	1,931	4,032	19·3	17·4	18·3	21·4	14
651	465	608	779	998	3,989	4,662	8,651	7·9	8·7	8·3	8·9	15
919	1,025	847	676	959	4,600	4,775	9,375	10·6	10·6	10·6	11·8	16
5,203	4,362	5,106	6,243	8,002	29,806	32,478	62,284	11·7	11·8	11·7	13·7	
1,937	2,002	1,981	2,178	2,233	11,502	10,689	22,191	15·3	13·9	14·6	16·6	17
3,081	3,174	2,990	2,790	1,993	15,050	13,117	28,167	19·4	16·6	17·9	15·8	18
1,449	1,501	1,960	1,981	1,524	9,048	8,367	17,415	22·0	20·4	21·3	21·5	19
2,182	3,039	2,308	2,063	2,055	13,468	11,461	24,929	14·3	13·1	13·8	12·9	20
952	1,058	854	932	940	5,672	4,744	10,416	12·0	10·3	11·2	11·8	21
9,601	10,774	10,093	9,944	8,745	54,740	48,378	103,118	16·3	14·7	15·5	15·3	
48,901	50,992	48,073	50,436	50,990	295,648	269,018	564,666	15·7	14·2	15·0	16·4	

Annual Form No. X.—Deaths registered from Dysentery and Diarrhœa in the

1	2	3	4	5									
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.
		Number in each district.	Number from which deaths from Dysentery and Diarrhoea were reported.	Number in each district.	Number from which deaths from Dysentery and Diarrhoea were reported.								
PATNA DIVISION.													
1	Patna	19	19	2,315	650	70	55	71	59	51	92	73	93
2	Gaya	16	15	12,180	159	15	7	10	9	12	11	24	31
3	Shahabad	17	13	6,689	46	9	1	3	11	1	3	4	4
	Total	52	47	21,184	855	94	63	84	79	64	106	101	128
TIRHUT DIVISION.													
4	Saran	13	13	4,807	464	33	41	26	46	39	43	50	60
5	Champanan	11	4	4,421	...	...	...	1	...	...	...	...	1
6	Muzaffarpur	14	13	4,561	154	12	10	11	37	15	7	12	15
7	Darbhanga	14	13	3,135	205	5	113	5	13	11	13	5	11
	Total	52	43	16,924	823	50	164	43	96	65	63	67	87
BHAGALPUR DIVISION.													
8	Monghyr	13	10	5,084	41	10	7	7	11	5	2	...	22
9	Bhagalpur	14	9	4,198	34	2	...	7	1	6	23	5	5
10	Purnea	17	7	4,160	20	4	...	...	3	1	...	2	2
11	Santal Parganas	10	9	5,934	23	9	50	5	9	14	6	6	3
	Total	54	35	19,376	118	25	57	19	24	26	31	13	32
ORISSA DIVISION.													
12	Cuttack	13	13	9,686	2,734	655	698	604	466	562	495	637	910
13	Balasore	10	10	5,791	365	35	39	35	26	35	31	42	43
14	Angul	2	2	1,748	33	2	...	4	...	1	2	1	10
15	Puri	6	6	4,530	1,884	352	312	324	275	309	251	303	361
16	Sambalpur	23	23	2,457	812	120	154	135	104	114	104	103	207
	Total	54	54	24,122	5,828	1,164	1,203	1,102	871	1,021	883	1,086	1,531
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	21	16	6,087	22	6	2	7	6	6	6	6	6
18	Ranchi	32	29	4,118	353	8	22	47	31	62	69	50	142
19	Palamau	10	5	3,862	4	...	..	...	...	1	1	...	1
20	Manbhum	35	20	6,509	60	3	2	10	10	2	3	7	12
21	Singhbhum	14	8	3,222	7	1	1	1	4	1	2	7	3
	Total	112	58	23,798	446	18	27	65	51	72	81	70	162
	Total for the Province	324	237	105,404	8,070	1,351	1,514	1,313	1,121	1,248	1,164	1,337	1,942

DIX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1932.

				6			7			8	1
September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
				Male.	Female.	Total.	Male.	Female.	Total.		
85	69	68	47	418	415	833	0·4	0·5	0·4	0·7	1
24	11	11	13	93	85	178	0·08	0·07	0·07	0·1	2
10	13	...	4	35	28	63	0·03	0·02	0·03	0·03	3
119	93	79	64	546	528	1,074	0·2	0·2	0·2	0·02	
38	30	32	32	248	222	470	0·2	0·2	0·2	0·3	4
1	...	2	1	4	2	6	0·003	0·001	0·002	0·008	5
11	7	6	11	93	61	154	0·06	0·04	0·05	0·08	6
12	7	15	15	123	102	225	0·07	0·06	0·07	0·06	7
62	44	55	59	468	387	855	0·09	0·07	0·08	0·1	
6	3	2	7	53	29	82	0·04	0·02	0·03	0·08	8
9	1	14	2	54	21	75	0·04	0·02	0·03	0·05	9
4	3	2	...	11	10	21	0·01	0·01	0·01	0·04	10
6	7	15	2	62	70	132	0·06	0·07	0·06	0·09	11
25	14	33	11	180	130	310	0·04	0·03	0·03	0·06	
511	473	534	631	3,800	3,376	7,176	3·7	2·9	3·3	4·1	12
27	21	30	52	227	189	416	0·5	0·4	0·4	0·5	13
7	5	3	5	21	19	40	0·2	0·2	0·2	0·3	14
222	246	239	268	1,778	1,684	3,462	3·5	3·1	3·3	3·9	15
188	120	78	85	800	712	1,512	1·8	1·6	1·7	2·1	16
955	865	884	1,041	6,626	5,980	12,606	2·6	2·2	2·4	2·9	
1	1	6	...	37	16	53	0·04	0·02	0·03	0·06	17
159	68	35	35	429	299	728	0·5	0·3	0·4	0·4	18
3	2	1	...	5	4	9	0·01	0·01	0·01	0·06	19
7	1	4	3	35	29	64	0·03	0·03	0·03	0·05	20
1	2	5	...	18	10	28	0·03	0·02	0·03	0·04	21
171	74	51	38	524	358	882	0·1	0·01	0·1	0·1	
1,332	1,090	1,102	1,213	8,344	7,383	15,727	0·4	0·4	0·4	0·5	

Annual Form No. XI.—Deaths registered from Respiratory diseases in the

1	2			3		4		5						
No.	District.			Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
				Number in each district.	Number from which deaths from Respiratory diseases were reported.	Number in each district.	Number from which deaths from Respiratory diseases were reported.							
PATNA DIVISION.														
1	Patna	...	...	19	19	2,315	570	104	89	97	75	58	75	63
2	Gaya	...	...	16	10	12,180	100	16	9	7	11	9	13	3
3	Shahabad	...	...	17	11	6,689	59	3	20	1	1	5	6	3
	Total	...	...	52	40	21,184	729	123	118	105	87	72	94	69
TIRHUT DIVISION.														
4	Saran	...	...	13	13	4,807	184	54	50	58	46	57	53	41
5	Champaran	...	...	11	5	4,421	...	...	...	1	1	18	3	...
6	Muzaffarpur	...	...	14	13	4,561	29	10	7	10	11	12	5	2
7	Darbhanga	...	...	14	12	3,135	17	1	6	4	3	5	1	1
	Total	...	...	52	33	16,924	230	65	63	73	61	92	62	44
BHAGALPUR DIVISION.														
8	Monghyr	..	...	13	9	5,084	34	7	5	9	7	5	5	2
9	Bhagalpur	...	...	14	10	4,198	24	1	5	13	4	7	1	1
10	Purnea	...	...	17	9	4,160	10	1	2	1	4	3	...	...
11	Santal Parganas	...	...	10	7	5,934	30	21	12	25	16	11	20	22
	Total	...	...	54	35	19,376	98	30	24	48	31	26	26	25
ORISSA DIVISION.														
12	Cuttack	...	...	13	13	9,686	861	82	93	115	60	90	84	99
13	Balasore	...	...	10	10	5,701	33	8	4	5	2	5	7	1
14	Angul	...	...	2	2	1,748	3	1	2	...	3	1	...	1
15	Puri	...	...	6	6	4,530	714	103	92	94	86	60	59	76
16	Sambalpur	...	...	23	23	2,457	630	89	92	93	97	81	73	86
	Total	...	...	54	54	24,122	2,241	283	283	307	248	237	223	263
CHOTA NAGPUR DIVISION.														
17	Hazaribagh	...	...	21	13	6,087	16	3	...	5	...	4	2	6
18	Ranchi	...	...	32	21	4,118	20	3	13	3	13	7	9	10
19	Palamau	...	...	10	3	3,862	...	1	...	...	...	...	...	...
20	Manbhum	...	...	35	25	6,509	90	7	9	11	17	8	6	2
21	Singhbhum	...	...	14	5	3,222	11	...	...	...	2	1	...	4
	Total	...	...	112	67	23,798	137	14	22	19	32	20	17	22
	Total for the Province	...	...	324	229	105,404	3,435	515	510	552	459	447	422	423

DIX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1932.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
66	58	72	83	83	480	443	923	0·5	0·5	0·5	0·6	1
7	9	13	9	11	67	50	117	0·05	0·04	0·05	0·05	2
4	23	4	...	1	33	38	71	0·03	0·03	0·03	0·02	3
77	90	89	92	95	580	531	1,111	0·2	0·2	0·2	0·2	
47	38	37	42	61	346	238	584	0·3	0·2	0·2	0·3	4
...	1	1	2	...	13	14	27	0·01	0·01	0·01	0·006	5
10	7	5	12	8	53	46	99	0·03	0·03	0·03	0·04	6
1	8	1	1	1	22	11	33	0·01	0·006	0·01	0·01	7
58	54	44	57	70	434	309	743	0·03	0·06	0·07	0·08	
6	1	4	3	8	35	27	62	0·03	0·02	0·03	0·03	8
10	1	26	1	1	42	29	71	0·03	0·03	0·03	0·03	9
2	1	...	1	...	5	10	15	0·004	0·01	0·007	0·01	10
9	12	8	13	15	137	47	184	0·1	0·04	0·1	0·09	11
27	15	38	18	24	219	113	332	0·05	0·03	0·04	0·04	
96	58	74	88	96	576	459	1,035	0·5	0·4	0·5	0·6	12
4	4	3	4	7	37	17	54	0·1	0·03	0·1	0·07	13
...	3	1	...	2	11	3	14	0·1	0·03	0·06	0·07	14
72	66	93	100	104	514	491	1,005	1·0	0·9	0·9	1·3	15
103	101	88	69	96	688	374	1,062	1·6	0·8	1·2	1·2	16
275	232	259	261	299	1,826	1,314	3,170	0·7	0·5	0·6	0·7	
1	4	3	...	1	19	10	29	0·02	0·01	0·02	0·02	17
1	6	5	3	4	47	30	77	0·06	0·03	0·04	0·05	18
...	10	...	1	...	9	3	12	0·02	0·007	0·01	0·006	19
8	7	6	8	8	68	29	97	0·07	0·03	0·05	0·05	20
2	1	...	...	1	6	5	11	0·01	0·01	0·01	0·02	21
12	28	14	12	14	149	77	226	0·04	0·02	0·03	0·04	
449	419	444	440	502	3,208	2,374	5,582	0·2	0·1	0·1	0·2	

Annual Form No. XII.—Deaths registered from Plague in the

1	2	3	4	5									
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	
		Number in each district.	Number from which deaths from Plague were reported.	Number in each district.	Number from which deaths from Plague were reported.								
PATNA DIVISION.													
1	Patna	19	...	2,315	...	...	...	...	...	...	...	...
2	Gaya	16	...	12,180	...	...	...	...	...	...	...	...
3	Shahabad	17	1	6,689	...	...	...	...	...	...	1	...
Total		52	1	21,184	...	...	...	...	...	...	1	...
TIRHUT DIVISION.													
4	Saran	13	7	4,807	62	132	223	234	91	12	...	1	
5	Champanan	11	...	4,421	...	...	...	...	...	...	...	...
6	Muzaffarpur	14	7	4,561	135	305	436	606	138	42	...	1	
7	Darbhanga	14	4	3,135	190	190	135	172	163	72	3	...	
Total		52	18	16,924	387	627	794	1,012	392	126	3	2	
BHAGALPUR DIVISION.													
8	Monghyr	13	3	5,084	41	55	117	96	47	7	1	...	
9	Bhagalpur	14	1	4,198	...	...	...	...	...	...	...	...
10	Purnea	17	...	4,160	...	...	...	...	...	...	...	...
11	Santal Parganas	10	...	5,934	...	...	...	...	...	...	...	...
Total		54	4	19,376	41	55	117	96	47	7	1	...	
ORISSA DIVISION.													
12	Cuttack	13	...	9,686	...	...	...	...	...	...	...	...
13	Balasore	10	...	5,701	...	...	...	...	...	...	...	...
14	Angul	2	...	1,748	...	...	...	...	...	...	...	...
15	Puri	6	...	4,530	...	...	...	...	...	...	...	...
16	Sambalpur	23	...	2,457	...	...	...	...	...	...	...	...
Total		54	...	24,122	...	...	...	...	...	...	...	...
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	21	...	6,087	...	...	...	...	...	...	...	...
18	Ranchi	32	...	4,118	...	...	...	...	...	...	...	...
19	Palamau	10	...	3,862	...	...	...	...	...	...	...	...
20	Manbhum	35	...	6,509	...	...	...	...	...	...	...	...
21	Singhbhum	13	...	3,222	...	...	...	...	...	...	...	...
Total		112	...	23,798	...	...	...	...	...	...	...	...
Total for the Province		324	23	105,404	428	682	911	1,108	439	133	5	2	

DIX I—concl'd.

districts of Bihar and Orissa Province, during each month of the year 1932.

					6			7			8	9
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
...	0.02	1
...	0.05	2
...	1	...	1	0.09	...	0.0005	0.03	3
...	1	...	1	0.0003	...	0.0003	0.03	
...	1	5	297	402	699	0.2	0.3	0.3	0.5	4
...	0.01	5
...	...	1	2	42	575	998	1,573	0.4	0.6	0.5	0.6	6
...	3	38	296	480	776	0.2	0.2	0.2	0.7	7
...	...	1	6	85	1,168	1,880	3,048	0.2	0.3	0.3	0.5	
...	116	207	323	0.1	0.2	0.1	0.3	8
...	2	...	...	...	1	1	2	0.001	0.001	0.001	...	9
...	10
...	11
...	2	...	...	...	117	208	325	0.03	0.05	0.04	0.09	
...	12
...	13
...	14
...	15
...	16
...	
...	17
...	18
...	19
...	20
...	21
...	
...	2	1	6	85	1,286	2,088	3,374	0.07	0.1	0.09	0.2	

APPENDIX II.

PROVINCIAL.

Statement showing details of registration in areas in which it is compulsory.

Compulsory registration area.	Population according to Census of 1931.	Probable number of births at the rate of 286 per 1,000 married women between the ages of 15 and 40.	Actual number of births registered during the year.	Probable birth-rate per mille (columns 2 and 3).	Registered birth-rate per mille during the year.	Number of deaths registered during the year.		Death-rate per mille.		Number of persons prosecuted under Act IV (B. C.) of 1873.	Number of persons convicted.
						Including deaths in dispensary.	Excluding deaths in dispensary.	Including deaths in dispensary.	Excluding deaths in dispensary.		
1	2	3	4	5	6	7	8	9	10	11	12
1. Patna City ...	159,690	Not available.	3,147	Not available.	19.7	2,292	1,665	14.3	10.4	...	...
2. Bihar ...	46,994		842		17.8	379	361	8.1	7.7	...	...
3. Dinapore Nizamat ...	24,321		445		18.3	272	247	11.2	10.2	...	...
4. Barh ...	9,750		212		21.7	129	113	13.2	11.6	...	...
5. Kbagol ...	7,413		129		17.4	91	91	12.2	12.2	...	...
6. Gaya ...	88,005		2,538		29.4	2,690	2,717	32.8	30.8	...	...
7. Tikari ...	5,481		244		44.5	114	113	20.8	20.6	...	...
8. Daudnagar ...	11,609		390		33.3	181	181	15.5	15.5	...	...
9. Arrah ...	48,922		651		13.3	259	179	5.3	3.6	...	...
10. Buxar ...	13,449		390		29.0	162	143	12.0	10.6	10	...
11. Dnnraon ...	14,431		323		22.4	49	30	3.4	2.1	11	...
12. Jagdispnr ...	9,661		271		28.1	80	76	8.3	7.8	...	...
13. Sasaram ...	25,175		619		24.6	227	209	9.0	8.3	1	...
14. Bhabna ...	6,002		195		32.5	45	34	7.5	5.5	18	17
15. Chapra ...	47,448		1,122		23.6	837	683	17.6	14.4	...	...
16. Revelganj ...	8,812		399		45.3	181	181	20.5	20.5	22	64
17. Siwan ...	14,215		737		51.8	210	151	14.7	10.6	145	95
18. Bettiah ...	27,941		462		16.5	142	2	5.1	0.07	26	21
19. Motihari ...	17,545		337		19.2	181	116	10.3	6.6	...	...
20. Muzaffarpur ...	43,049		1,225		28.4	649	547	15.1	12.7	24	...
21. Sitamarhi ...	10,701		319		29.8	203	170	19.0	15.9	9	...
22. Hajipur ...	19,299		664		34.4	358	338	18.5	17.5	8	...
23. Lalganj ...	9,192		293		31.8	193	193	21.0	21.0	6	...
24. Darbhanga ...	60,676		1,946		32.1	1,204	1,015	19.8	16.7	...	...
25. Roserah ...	8,860		260		29.3	110	109	12.4	12.3	...	...
26. Samastipur ...	9,891		199		20.1	93	64	9.4	6.4	...	...
27. Madhubani ...	18,789		440		23.4	185	185	9.8	9.8	...	...
28. Monghyr ...	52,863		1,434		27.1	588	483	11.1	9.1	...	...
29. Jamalpur ...	30,346		970		32.0	361	340	11.9	11.2	...	...
30. Bhagalpur ...	83,847		1,359		16.2	654	531	7.8	6.3	...	...
31. Colgong ...	5,233		165		31.5	85	85	16.2	16.2	...	...
32. Purnea ...	15,474		193		12.4	164	75	10.6	4.8	...	...
33. Kishanganj ..	8,946		124		13.8	69	40	7.7	4.4	...	...
34. Katihar ...	15,864		122		7.6	54	36	3.4	2.2	...	...
35. Forbesganj ...	5,939		133		22.4	81	61	13.6	13.6	...	...
36. Sahibganj; ...	15,883		99		6.2	30	17	1.9	1.0	...	...
37. Deoghar ...	14,217		230		16.2	56	21	3.9	1.4	13	11
38. Dumka ...	9,471		71		7.5	39	39	4.1	4.1	...	...
39. Madhupur ...	8,965		65		7.2	32	21	3.6	2.3	...	...
40. Cuttack ...	65,263		958		14.7	471	308	7.2	4.7	...	...
41. Kendrapara ...	12,620		341		27.0	382	370	30.2	29.3	...	...
42. Jajpur ...	10,673		231		21.6	141	133	13.2	12.4	...	...
43. Balasore ...	17,843		323		18.1	327	272	18.3	15.2	4	2
44. Pnri ...	37,568		628		16.7	1,075	917	28.6	24.4	...	...
45. Sambalpur ...	15,017		391		26.0	266	239	17.7	15.9	...	...
46. Hazaribagh ...	20,977		404		19.2	134	53	6.4	2.5	...	...
47. Chatra ...	8,758		312		35.6	78	64	8.9	7.3	...	...
48. Giridih ...	21,122		251		11.8	96	71	4.5	3.3	...	...
49. Ranchi ...	50,517		579		11.4	239	85	4.7	1.6	...	...
50. Lohardaga ...	7,577		210		27.7	104	97	13.7	12.8	...	...
51. Daltonganj ...	12,040		235		19.5	70	12	5.8	0.9	12	12
52. Purnia ...	25,974		495		19.0	261	184	10.0	7.1	...	...
53. Raghunathpur ...	7,139		153		22.1	89	89	12.5	12.5	...	...
54. Jhaldah ...	6,924		174		25.0	82	82	11.8	11.8	...	...
55. Dhanbad ...	16,356		315		19.2	222	133	13.6	8.1	...	...
56. Chaitassa ...	10,785		348		32.2	142	120	13.1	11.1	10	8
57. Chakradharpur ...	11,191		133		11.8	63	55	5.6	4.9	10	2
58. Jugsalai ...	8,721		253		29.0	45	45	5.1	5.1	8	8
(a) Total ...	1,401,422		30,553		21.8	18,216	15,011	13.0	10.7	337	240

(a) Excluding cantonment population.

APPENDIX III.

JHARIA MINING AREA.

STATISTICS OF EPIDEMIC DISEASES.

1932.

Month.	Total births.	Total deaths.	Influenza.		Cholera.		Small-pox.		Plague.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	2	3	4	5	6	7	8	9	10	11
January ...	143	74	32	1	...	...	44	...	...	...
February ...	101	63	103	...	3	...	98	...	...	...
March ...	135	73	192	1	7	1	111	...	...	...
April ...	153	91	259	...	8	2	92	...	...	...
May ...	160	74	134	3	4	1	29	...	...	...
June ...	131	74	146	4	7	2	7	...	...	...
July ...	193	73	377	1	15	4	...	...	...	...
August ...	204	111	649	2	2	1	2	...	...	...
September ...	193	121	659	6	1	...	...	...	...	...
October ...	184	85	287	4	...	...	...	...	...	...
November ...	157	71	78	2	2	...	2	...	...	...
December ...	173	65	16	...	2	...	11	...	...	...
Total ...	1,942	980	2,932	24	51	11	396	...	...	...
Ratio per Mille ...	15.4	7.7	23.3	0.2	0.4	0.09	3.1	...	...	...

N.B.—The figures relate to the labour population only and the ratios are calculated accordingly.

STATEMENT NO. I.—Showing particulars of Vaccination in the

Number.	District.	Population of district according to the census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary						
					Male.	Female.	Total.		Total.						
1	2	3	4	5	6			7	8						
Patna Division.															
1	Patna	...	{	...	1,846,474	893	{	19	28,869	12,487	41,356	2,177	10,702		
									28,477	24,522	52,999	736	50,812		
2	Gaya	...	{	...	2,388,462	506	{	8	8,132	4,207	12,339	1,542	4,438		
									60,191	42,144	102,335	1,112	76,028		
3	Shahabad	...	{	...	1,903,489	456	{	30	11,449	6,359	17,808	593	8,003		
									24,594	19,627	44,221	497	41,670		
Total of Patna Division				{	By paid Vaccinators	6,228,425	558	{	57	48,450	23,053	71,503	1,254	23,143
				{	By licensed Vaccinators	...			{	265	113,262	86,293	199,555	753	169,110
Tirhut Division.															
4	Saran	...	{	...	2,436,468	927	{	17	16,531	11,438	27,969	1,645	11,586		
									41,000	38,117	79,117	899	71,674		
5	Champaran	...	{	...	2,145,887	607	{	17	23,477	11,337	34,814	2,048	5,191		
									27,354	23,360	50,714	757	46,680		
6	Muzaffarpur	...	{	...	2,941,025	968	{	14	14,601	6,839	21,440	1,531	3,633		
									60,112	51,537	111,649	1,413	94,505		
7	Darbhanga	...	{	...	3,166,094	945	{	14	16,680	8,897	25,577	1,827	4,742		
									69,715	52,669	112,375	1,277	100,451		
Total of Tirhut Division				{	By paid Vaccinators	10,739,274	852	{	62	71,289	38,511	109,800	1,771	25,152
				{	By licensed Vaccinators	...			{	322	188,181	165,674	353,855	1,099	313,310
Bhagalpur Division.															
8	Monghyr	...	{	...	2,287,154	582	{	6	6,442	2,621	9,063	1,510	1,645		
									44,928	38,919	83,847	1,374	66,765		
9	Bhagalpur	...	{	...	2,234,632	528	{	13	14,421	6,455	20,876	3,226	3,311		
									38,185	32,683	70,868	1,124	64,290		
10	Purnea	...	{	...	2,186,543	439	{	18	6,036	2,925	8,961	498	1,755		
									29,164	23,761	52,925	912	49,987		
11	Santal Parganas	...	{	...	2,051,472	375	{	10	7,901	4,890	12,791	1,279	6,516		
									26,878	24,403	50,781	923	48,421		
Total of Bhagalpur Division.				{	By paid Vaccinators	8,759,801	471	{	47	34,800	16,891	51,691	1,100	13,287
				{	By licensed Vaccinators	...			{	237	138,655	119,766	258,421	1,090	229,472
Orissa Division.															
12	Cuttack	...	{	...	2,176,707	595	{	20	10,375	4,717	15,092	755	3,118		
									22,529	18,926	41,455	568	40,013		
13	Balasore	...	{	...	990,600	492	{	4	7,496	3,198	10,694	2,673	1,079		
									26,987	19,837	46,824	1,170	26,670		
14	Angul	...		By licensed Vaccinators	...	222,736	132	13	4,319	3,898	8,217	632	7,889		
15	Puri	...		By paid Vaccinators	...	1,035,154	415	29	32,270	22,896	55,166	1,902	45,840		
16	Sambalpur	...	{	...	880,945	230	{	4	2,408	813	3,221	805	254		
									34	10,949	9,173	20,122	592	17,851	
Total of Orissa Division				{	By paid Vaccinators	...	5,306,142	387	{	57	52,549	31,624	84,173	1,473	50,291
				{	By licensed Vaccinators	...			{	180	64,784	51,834	116,618	729	92,423

districts of Bihar and Orissa during the year 1932-33.

Vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.	
Successful.				Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
Under one year.	One year and under six years.	Total of all ages.	Unknown.												
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
2,130	6,738	9,615	459	30,654	13,107	7,943	93·87	57·71	41·13	4·28	25·91	56,285	30·48	728	0·39
5,529	42,577	50,750	11	2,187	754	670	99·89	49·70		0·02	30·63				
2,480	1,669	4,428	10	7,901	5,479	2,422	100·00	100·00	41·34	0·23	30·65	64,049	26·81	1,130	0·49
9,012	51,734	76,034	414	25,707	12,367	7,413	99·76	67·62		0·54	28·83				
2,979	3,723	7,964	27	9,805	6,781	301	99·85	71·35	29·36	0·34	3·07	51,230	25·69	1,002	0·50
10,635	24,922	41,657	5	2,551	1,310	195	99·93	55·60		0·01	7·64				
7,569	12,131	22,007	496	48,360	25,367	10,666	97·17	67·30	36·97	2·14	22·05	171,564	27·54	2,910	0·47
25,176	118,933	168,441	430	30,445	14,431	8,278	99·86	65·10		0·25	27·19				
2,243	5,835	11,491	1	16,383	10,045	1,293	99·18	66·57	39·63	0·008	7·89	83,826	33·71	1,771	0·43
16,047	46,533	71,341	138	7,443	4,930	286	99·72	66·88		0·19	3·84				
731	3,309	4,397	562	29,623	5,587	16,091	94·99	41·02	37·41	10·83	51·02	47,287	22·04	563	0·23
5,670	39,392	46,513	92	4,034	1,309	2,101	99·84	67·72		6·19	52·08				
565	2,912	3,539	38	17,807	4,472	6,814	98·44	40·63	37·23	1·04	35·26	97,094	23·01	526	0·13
7,45	86,056	94,134	42	17,144	6,771	3,129	99·76	48·31		0·01	18·25				
1,023	2,693	4,713	1	20,835	8,087	4,188	99·41	48·58	37·89	0·02	20·10	104,705	33·07	662	0·21
27,441	72,673	100,394	1	11,924	5,678	1,646	99·94	55·24		0·001	13·80				
4,562	14,790	24,140	602	84,648	28,101	28,299	98·33	50·03	35·70	2·39	33·44	332,912	31·00	2,762	0·23
16,863	244,654	312,382	273	40,545	18,698	7,161	99·79	55·98		0·09	17·66				
670	954	1,640	...	7,418	980	4,185	99·69	30·31	32·96	...	56·43	71,034	31·06	910	0·40
18,462	47,428	66,753	1	17,082	6,025	3,311	99·99	43·75		0·001	19·38				
744	2,503	3,310	...	17,565	9,019	3,435	99·99	55·91	37·20	...	19·55	75,025	33·13	501	0·23
23,741	59,461	64,169	38	6,569	3,731	806	99·85	64·74		0·05	12·26				
299	1,019	1,462	141	7,203	1,967	2,523	99·58	40·72	24·55	8·03	35·01	46,185	21·12	466	0·21
11,312	35,280	49,359	289	2,938	772	1,604	99·31	57·87		0·58	51·59				
3,130	3,250	6,437	53	6,275	2,255	2,491	99·60	59·59	33·04	0·81	39·69	61,744	30·09	584	0·29
24,507	23,272	48,169	129	2,360	833	708	99·74	50·43		0·26	39·00				
4,852	7,726	12,849	194	38,464	14,161	12,634	98·59	54·82	30·46	1·43	32·84	253,988	28·99	2,461	0·23
78,325	145,444	238,450	457	28,949	11,361	6,429	99·75	50·45		0·20	22·21				
718	1,783	2,939	109	11,974	2,321	6,678	97·70	43·82	21·24	3·49	55·77	47,055	21·61	1,025	0·47
15,783	23,038	39,946	34	1,442	508	583	99·92	59·14		0·08	40·43				
162	568	767	312	9,615	2,581	4,605	100·00	51·52	44·92	28·91	47·89	40,331	40·71	264	0·27
4,216	20,529	26,602	50	20,154	14,554	2,757	99·93	83·65		0·13	13·68				
4,209	3,580	7,825	34	328	271	17	99·62	87·14	36·35	0·43	5·18	11,019	49·47	1	0·004
10,104	31,027	45,108	606	9,326	3,593	3,297	99·72	59·59	47·29	1·32	35·53	43,235	41·76	473	0·46
117	133	253	1	2,967	512	2,365	100·00	85·05	23·60	0·39	79·71	22,254	25·26	659	0·75
12,639	4,984	17,794	34	2,271	1,817	393	99·87	96·75		0·19	17·30				
11,101	33,511	49,067	1,038	33,862	9,007	16,945	99·60	53·18	31·55	2·04	50·01	163,894	30·89	2,422	0·46
36,846	52,141	92,167	152	24,195	17,150	3,750	99·89	83·83		0·16	15·50				

STATEMENT NO. I.—Showing particulars of Vaccination in the

Number.	District.	Population of district according to the census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary	
					Male.	Female.	Total.		Total.	
1	2	3	4	5	6			7	8	
Chota Nagpur Division.										
17	Hazaribagh ...	{ By licensed Vaccinators ... } { By paid Vaccinators ... }	1,517,357	216	{ 7 44	2,798 25,214	1,816 22,922	4,614 48,136	659 1,094	1,685 45,501
18	Ranchi	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	1,567,149	220	{ 9 45	29,694 28,251	18,054 21,888	47,748 50,139	5,305 1,114	5,234 38,766
19	Palamau ...	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	818,736	166	{ 6 25	5,240 10,144	2,462 8,865	7,702 19,009	1,284 760	1,337 18,015
20	Manbhum ...	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	1,810,890	442	{ 25 41	16,908 16,960	11,685 17,373	28,593 36,333	1,144 885	17,147 35,764
21	Singhbhum ...	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	929,802	239	{ 5 26	1,206 10,143	655 9,690	1,861 19,833	372 763	1,094 19,738
Total of Chota Nagpur Division.		{ By paid Vaccinators ... } { By licensed Vaccinators ... }	6,643,934	235	{ 52 181	55,846 92,712	34,672 80,738	90,518 173,450	1,740 958	26,497 167,784
Total of Vaccine Department.		{ By paid Vaccinators ... } { By licensed Vaccinators ... } { Total ... }	37,677,576	453	{ 275 1,165 1,440	262,934 597,594 860,528	144,751 504,305 649,056	407,685 1,101,899 1,509,584	1,482 946 1,048	138,310 963,099 1,100,409
Total Collieries		...	...	...	...	3,578	1,378	4,956	...	1,064
Dispensaries and Leper Asylum		...	...	...	...	497	150	647	...	91
Total Cooly Department		...	...	...	...	1,569	1,077	2,646	...	193
Total Jails and Cantonments		...	...	...	...	29,482	1,321	30,803	...	678
Grand Total		...	...	...	...	895,654	652,982	1,548,636	...	1,102,435

districts of Bihar and Orissa during the year 1932-33—concl'd.

Vaccination.				Revaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.	
Successful.				Total.	Successful.	Unknown.	Primary.	Revaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
Under one year.	One year and under six years.	Total of all ages.	Unknown.												
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
616	1,013	1,654	17	2,929	1,134	1,002	99·16	58·85	34·05	1·01	34·21	47,964	31·61	201	0·13
18,299	26,726	45,366	12	2,635	1,251	708	99·79	64·92		0·03	26·87				
2,589	2,150	5,234	...	43,514	24,794	6,336	100·00	68·53	49·73	...	14·90	59,141	37·74	258	0·16
31,749	6,902	38,766	...	11,373	8,447	1,539	100·00	85·89		...	13·53				
389	771	1,154	174	6,365	151	5,098	99·23	41·14	23·96	13·01	94·23	23,580	28·80	488	0·60
11,075	6,061	17,813	117	994	408	587	99·52	67·55		0·65	38·93				
3,273	13,216	16,582	271	11,446	5,807	1,860	98·26	60·58	32·57	1·58	16·25	61,100	33·74	98	0·05
13,503	21,929	35,717	...	569	375	25	99·86	68·03		...	4·39				
634	388	1,079	8	767	273	42	99·36	37·65	22·71	0·73	5·47	23,095	24·84	103	0·11
12,879	6,768	19,707	16	95	60	2	99·92	64·51		0·08	2·10				
7,451	17,538	25,703	470	64,021	32,159	15,238	98·75	65·92	33·39	1·77	23·80	214,850	32·34	1,148	0·17
87,505	68,386	157,398	145	15,666	10,541	2,661	99·85	81·05		0·09	16·98				
35,535	85,704	133,766	2,790	269,375	108,885	83,782	98·70	58·66	33·80	2·02	31·10	1,137,238	30·18	11,703	0·31
244,755	629,558	958,838	1,457	139,800	72,171	28,280	99·58	64·71		0·16	20·23				
280,290	715,262	1,092,604	4,247	409,175	181,056	112,062	99·68	60·94		0·38	27·39				
485	491	1,020	2	3,892	1,558	324	96·04	43·65	...	0·19	8·32	...	...	...	...
10	69	86	2	556	294	47	96·63	57·76	..	2·25	8·45	...	...	...	...
...	...	...	193	2,453	...	2,453	...	...	...	100·00	100·00	...	..	...	...
275	151	638	27	30,125	13,621	4,601	95·00	53·26	...	3·98	15·27	...	...	...	...
281,060	715,973	1,694,348	4,471	446,301	196,529	119,487	99·07	60·16	34·26	0·40	26·78	...	...	...	...

SUMMARY.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Department.	Average cost of each successful case.	
	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under 6 years.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
												Rs. a. p.	Rs. a. p.	
BY SPECIAL STAFF.														
Statement (I) ...	1,106,409	409,175	1,100,409	409,175	99·68	60·94	1,440	1,048	280,290	715,262	34·26	1,55,119 9 5	0 2 1	
BY OTHER AGENCIES.														
Collieries, Dispensaries and Lener Asylum, Cooly Depôt, Jails and Cantonments.	2,026	37,026	2,026	37,026	96·78	52·27	...	...	770	711			
Total ...	1,102,435	446,201	1,102,435	446,201	99·67	60·16	1,440	1,048	281,060	715,973	34·26	1,55,119 9 5	0 2 1	

APPENDIX II.

STATEMENT NO. II.—Showing the cost of vaccination in the

No.	Circle and district.	Expen									
		Native supervising officer.	Pay.	Paid vaccinators.	Pay.	Licensed vaccinators.	Pay.	Clerks.	Pay.	Peons, etc.	Pay.
1	2	3	4	5	6	7	8	9	10	11	12
	PATNA DIVISION.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
1	Patna ... ..		...	19	3,095 1 0	72	...	...	...	1	120 0 0
2	Gaya	4	1,964 14 0	8	1,844 6 0	92	...	1	58 11 0	2	216 0 0
3	Shahabad	5	2,509 0 0	30	1,699 4 0	101	...	...	...	...	...
	Total of Patna Division	9	4,473 14 0	57	6,638 11 0	265	...	1	58 11 0	3	336 0 0
	TIRHUT DIVISION.										
4	Saran	4	2,136 0 0	17	1,663 14 0	88	...	...	...	...	...
5	Champaran	3	2,110 7 11	17	879 0 0	67	...	...	...	...	...
6	Muzaffarpur	4	1,909 11 0	14	1,644 10 0	79	...	...	...	...	...
7	Darbhanga	4	2,100 0 0	14	1,461 13 0	89	...	...	...	...	...
	Total of Tirhut Division	15	8,256 2 11	63	5,649 4 0	322	...	...	...	...	...
	BHAGALPUR DIVISION.										
8	Monghyr	4	1,980 0 0	6	719 3 0	61	...	...	...	1	96 0 0
9	Bhagalpur	5	3,409 11 0	13	1,718 3 0	63	...	...	...	...	...
10	Purnea	4	1,741 9 3	18	2,944 0 0	58	...	...	...	...	...
11	Santal Parganas	6	2,760 0 0	10	2,127 4 0	55	...	...	...	...	...
	Total of Bhagalpur Division	19	8,891 4 3	47	7,508 10 0	237	...	...	...	1	96 0 0
	ORISSA DIVISION.										
12	Cuttack	4	2,016 0 0	20	2,164 14 0	73	...	...	...	...	...
13	Balasore	3	1,500 0 0	4	301 10 0	40	...	...	...	...	...
14	Angul	2	1,110 0 0	...	...	13	...	...	...	...	...
15	Puri	3	1,608 0 0	29	3,713 11 0	...	...	...	...	...	...
16	Sambalpur	3	1,460 1 0	4	616 6 0	34	...	...	...	...	...
	Total of Orissa Division	15	7,694 1 0	57	6,796 2 6	160	...	...	...	...	...
	CHOTA NAGPUR DIVISION.										
17	Hazaribagh	4	2,070 0 0	7	1,640 3 3	44	...	...	...	...	...
18	Ranchi	5	2,388 0 0	9	1,348 4 0	45	...	...	...	...	...
10	Palamau	3	1,576 3 0	6	1,007 11 0	25	...	...	...	...	...
20	Manbhum	3	1,596 0 0	25	3,108 10 0	41	...	...	...	...	...
21	Singhbhum	3	1,435 9 0	5	895 12 2	26	...	...	...	...	...
	Total of Chota Nagpur Division	18	9,064 12 0	52	8,000 8 5	181	...	...	...	...	...
	Total of Vaccine Circle	82	39,380 2 2	275	34,593 10 5	1,165	...	1	58 11 0	4	432 0 0
	ESTABLISHMENT OF THE ASSISTANT DIRECTOR OF PUBLIC HEALTH, NORTH BIHAR CIRCLE.	1	6,527 8 0	...	...	...	...	2	1,185 12 0	2	240 0 0
	DITTO, SOUTH BIHAR CIRCLE	1	21,875 3 4	...	...	...	...	2	1,182 0 0	2	240 6 0
	DITTO, CHOTA NAGPUR AND ORISSA CIRCLES	1	12,960 0 0	...	...	...	...	3	1,257 0 0	3	264 13 0
	Total	3	41,362 11 4	...	...	...	...	6	3,624 12 0	8	745 3 0
	Total of Province ... ..	...	80,742 13 6	...	34,593 10 5	...	...	7	3,683 7 0	12	1,177 3 0

Province of Bihar and Orissa during the year 1932-33.

diture.					Paid from—							Number of all successful vacci- nations and revaccinations.	Average cost of each successful case.
Total pay of establish- ment.	Travelling allowance.	Contingencies.		Total cost.	Imperial Fund.	Provincial Fund.	Local Fund.	Municipalities.	Native States.	Total.			
		Cost of lymph.	Other contin- gencies.										
13	14	15	16	17	18	19	20	21	22	23	24	25	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
3,215 1 0	30 0 0	...	259 0 0	3,503 1 0	...	...	1,215 0 0	2,288 1 0	...	3,503 1 0	75,944	0 0 9
4,083 15 0	1,276 9 6	...	50 4 0	5,510 12 6	...	3,341 7 6	1,265 5 0	904 0 0	...	5,510 12 6	99,930	0 0 10	
4,208 4 0	1,954 13 0	...	242 9 6	6,405 10 6	...	4,623 13 0	924 0 0	857 13 6	...	6,405 10 6	58,536	0 1 9	
11,507 4 0	3,361 6 6	...	550 13 6	15,419 8 0	...	7,965 4 6	3,404 5 0	4,049 14 6	...	15,419 8 0	234,410	0 1 1	
3,799 14 0	1,549 7 0	...	277 0 0	5,626 5 0	...	3,509 9 0	1,244 14 0	871 14 0	...	5,626 5 0	98,552	0 0 10	
2,959 7 11	252 14 6	...	64 0 0	3,306 6 5	...	2,385 13 0	514 1 5	406 8 0	...	3,306 6 5	58,822	0 0 10	
3,554 5 0	1,308 2 0	...	118 5 9	4,980 13 9	...	3,237 8 9	646 12 0	1,096 8 0	...	4,980 12 9	109,499	0 0 9	
3,561 12 0	1,000 15 0	...	200 14 0	4,763 9 0	...	3,190 15 0	637 12 0	884 14 0	...	4,763 9 0	119,977	0 0 7	
13,905 6 11	4,111 6 6	...	660 3 9	18,677 1 2	...	12,323 13 9	3,093 7 5	3,259 12 0	...	18,677 1 2	386,850	0 0 9	
2,795 3 0	1,502 13 0	...	232 9 0	4,530 9 0	...	3,657 13 0	...	842 12 0	...	4,530 9 0	75,398	0 0 11	
5,127 14 0	515 13 0	...	81 0 0	5,724 11 0	...	4,005 8 0	1,099 9 0	619 10 0	...	5,724 11 0	83,279	0 1 1	
4,685 9 3	1,367 5 3	...	462 0 6	6,514 15 0	...	2,513 4 0	2,858 11 9	1,144 15 3	...	6,514 15 0	53,694	0 1 11	
4,887 4 0	2,200 15 0	...	146 13 6	7,235 0 6	...	5,090 15 0	1,317 4 0	826 13 6	...	7,235 0 6	59,443	0 1 11	
17,495 14 3	5,586 14 3	...	922 7 0	24,005 3 6	...	15,397 8 0	5,273 8 9	3,434 2 9	...	24,005 3 6	271,814	0 1 5	
4,180 14 0	1,319 4 0	...	161 4 0	5,661 6 0	...	3,470 3 0	1,346 14 0	844 5 0	...	5,661 6 0	46,251	0 1 11	
1,801 10 0	881 13 0	...	70 0 0	2,753 7 0	...	2,451 13 0	49 10 0	252 0 0	...	2,753 7 0	41,504	0 1 0	
1,110 0 0	627 12 0	...	84 8 0	1,822 4 0	...	1,822 4 0	...	...	...	1,822 4 0	6,096	0 3 7
5,321 11 0	986 10 0	...	103 12 0	6,412 1 0	...	2,694 10 0	3,514 13 0	202 10 0	...	6,412 1 0	48,950	0 2 1	
2,076 7 0	1,024 12 0	...	106 6 0	3,207 9 0	...	2,520 1 0	489 2 0	198 6 0	...	3,207 9 0	20,787	0 2 6	
14,490 10 0	4,840 3 0	...	525 14 0	19,856 11 0	...	12,958 15 0	5,400 7 0	1,497 5 0	...	19,856 11 0	168,588	0 1 11	
3,710 3 3	1,341 3 0	...	106 0 0	5,157 6 3	...	3,511 3 0	1,093 0 3	548 3 0	...	5,157 6 3	51,672	0 1 7	
3,736 4 0	1,772 13 0	...	100 6 6	5,609 7 6	...	4,250 13 0	433 0 0	922 10 6	...	5,609 7 6	77,940	0 1 2	
2,582 14 0	1,248 3 0	...	41 10 6	3,872 11 6	...	2,806 8 0	819 8 3	246 11 3	...	3,872 11 6	19,617	0 3 2	
4,704 10 0	452 6 0	...	120 7 6	5,277 7 6	...	2,032 3 0	2,664 9 0	580 11 6	...	5,277 7 6	58,867	0 1 5	
2,331 6 2	470 4 0	...	70 4 6	2,871 13 8	...	1,965 13 0	135 0 0	771 0 8	...	2,871 13 8	21,119	0 2 2	
17,065 4 5	5,384 13 0	...	438 13 0	22,788 14 5	...	14,566 8 0	5,153 1 6	3,069 4 11	...	22,788 14 5	229,215	0 1 7	
74,464 7 7	23,184 11 3	...	3,098 3 3	1,00,747 6 1	...	63,112 1 3	22,324 13 8	15,310 7 2	...	1,00,747 6 1	1,290,877	0 1 3	
7,953 4 0	2,782 7 0	...	737 2 9	11,472 13 9	...	11,472 13 9	...	...	...	11,472 13 9	...	...
23,297 9 4	1,349 10 0	...	755 12 9	25,403 0 1	...	25,403 0 1	...	...	...	25,403 0 1	...	...
14,481 13 0	2,740 11 0	...	273 13 6	17,496 5 6	...	17,496 5 6	...	...	...	17,496 5 6	...	...
45,732 10 4	6,872 12 0	...	1,766 13 0	54,372 3 4	...	54,372 3 4	...	...	...	54,372 3 4	...	...
1,20,197 1 11	30,057 7 3	...	4,865 0 3	1,55,119 9 5	...	1,17,484 4 7	22,324 13 8	15,310 7 2	...	1,55,119 9 5	...	0 2 1	

Comparative statement no. III—Showing the percentage of persons primarily vaccinated to the total number of vaccinations performed in the Province of Bihar and Orissa in each of the undermentioned official years.

Establishments.	Years.									
	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	1932-33.
1	2	3	4	5	6	7	8	9	10	11
Government staff ...	...	...	...	14.17	25.46	14.13	7.36	9.56	9.99	...
Dispensaries ...	0.29	...	...	...	29.76	...	14.75	9.45	75.00	14.03
Municipal ...	83.90	72.96	43.40	49.70	62.34	73.47	71.71	64.03	67.13	30.88
District Board ...	76.06	80.42	60.52	55.95	52.10	60.14	67.12	70.70	64.30	38.61
Licensed vaccinators ..	99.40	98.62	92.11	93.02	96.21	97.60	97.59	92.75	97.29	90.97
Rails and collieries ...	98.97	94.28	28.12	31.91	29.82	34.23	35.25	34.23	28.78	21.47
Jails ...	8.63	4.36	3.88	1.75	1.09	1.49	1.34	1.11	0.78	2.20
Cooly Dépôt ...	5.70	3.22	2.81	3.69	1.26	2.31	0.51	0.45	1.42	7.29
Cantonment ...	96.60	92.73	84.47	51.71	36.49	...	93.08	89.21	94.03	53.81

STATEMENT No. IV.

STATEMENT NO. IV.—Showing particulars of vaccination

District.	Total number of persons vaccinated.		Total number inspected—								Percentage of	
			By Assistant Directors of Public Health or Superintendent of Vaccination.				By Native Superintendents or other Inspecting Officers.				By Assistant Director or Superintendent	
			Assistant Directors of Public Health.		Superintendent of vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health,	
	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13
Patna ...	61,896	35,120	1,939	...	2,104	29	5,675	220	...	...	3.14	...
Gaya ...	81,131	36,374	1,479	...	...	...	437	...	5,174	...	1.82	...
Shahabad ...	49,673	15,140	2,805	...	1,343	15	6,984	31	14,837	489	5.65	...
Saran ...	83,260	24,815	5,153	...	8,020	...	10,273	...	28,890	565	6.19	...
Champaran ...	51,886	35,589	4,968	...	2,994	25	2,678	730	19,343	1,403	9.57	...
Muraffarpur ...	98,302	36,046	15,358	...	8,527	24	16,196	208	35,190	36	15.62	...
Darbhanga ...	10,5,284	34,330	5,362	...	2,765	...	7,230	...	20,924	...	5.09	...
Monghyr ...	68,410	24,500	3,543	...	2,977	...	9,877	...	13,039	...	5.18	...
Bhagalpur ...	67,630	30,732	5,808	...	5,440	...	9,001	...	18,592	...	8.59	...
Purnea ...	51,742	10,886	2,862	...	2,897	191	19,143	2,003	2,867	...	5.53	...
Santal Parganas ...	55,296	12,432	7,272	...	307	...	1,962	...	16,823	588	13.15	...
Cuttack ...	43,142	14,965	1,406	...	...	1,130	4,027	...	8,554	...	3.26	...
Balasore ...	27,749	9,769	1,533	...	1,058	108	4,480	3,266	3,003	1,282	5.52	...
Angul ...	7,889	692	1,828	...	1,190	3	3,220	48	1,591	99	23.17	...
Puri ...	45,841	10,140	2,150	...	738	1,027	13,426	1,685	22,217	4,207	4.69	...
Sambalpur ...	18,105	6,410	1,981	...	2,402	197	3,067	193	8,376	744	10.94	...
Hazaribagh ...	47,894	8,793	6,888	...	1,565	74	4,412	346	12,140	24	14.35	...
Ranchi ...	44,004	55,075	4,674	...	...	...	5,225	8,566	15,730	6,580	10.62	...
Palamau ...	19,458	9,148	3,512	...	1,692	321	4,380	14	4,664	41	18.05	...
Manbhum ...	52,911	14,383	2,956	...	1,371	2,368	4,077	102	4,103	...	5.59	...
Singhbhum ...	20,832	862	3,284	...	1,990	...	2,821	18	5,249	6	15.76	...
TOTAL ...	1,103,434	446,21	86,761	...	49,280	5,512	138,591	17,430	261,311	17,064	7.87	...

verified by Inspecting Officers during the year 1932-33.

Inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.										Percentage of successful cases reported by vaccinators.	
By Assistant Directors of Public Health or Superintendent of Vaccination.		By Native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or Superintendent of Vaccination.				By Native Superintendents or other Inspecting Officers.							
Superintendent of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.		Superintendent of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.					
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
3.40	0.08	9.17	0.63	...	...	93.91	...	96.91	20.69	94.60	27.27	...	...	99.20	42.13
...	...	0.54	...	6.38	...	99.33	...	...	...	99.31	...	99.30	...	99.22	48.10
2.50	0.10	14.06	0.20	29.86	3.23	95.29	...	99.27	100.00	99.95	93.55	90.71	95.70	99.99	58.88		
9.64	...	12.34	...	34.69	2.28	98.17	...	99.77	...	99.47	...	99.70	78.23	99.49	63.35		
5.77	0.70	5.16	2.05	37.28	3.94	96.61	...	99.76	52.08	66.35	28.77	98.48	67.42	99.41	45.94		
8.67	0.07	16.47	0.58	35.79	2.87	99.06	...	99.99	33.33	99.49	32.21	98.93	22.39	99.53	32.35		
2.51	...	6.86	...	19.87	...	98.00	...	98.08	...	99.74	...	99.83	...	99.91	43.06		
4.35	...	14.43	...	19.06	...	98.76	...	100.00	...	99.78	...	99.75	...	99.97	41.19		
8.04	...	13.31	...	27.49	...	95.01	...	98.42	...	99.74	...	99.13	...	99.71	52.83		
5.59	1.75	37.00	18.40	5.54	...	91.09	...	100.00	100.00	100.00	100.00	100.00	...	98.20	26.20		
0.55	...	3.54	...	30.43	4.72	98.06	...	98.69	...	98.87	...	93.92	16.49	99.39	38.95		
...	7.55	9.33	...	19.83	...	97.36	...	...	41.23	99.08	...	98.56	...	99.42	22.41
3.81	0.36	16.13	10.97	19.82	4.30	99.02	...	100.00	92.57	98.77	96.01	69.20	83.68	98.63	57.55		
15.08	0.43	40.30	6.94	20.17	14.30	98.35	...	99.66	1.00	99.09	72.92	98.18	85.86	99.18	82.62		
1.61	10.13	29.29	16.61	48.47	45.11	98.04	...	99.19	20.01	98.79	38.28	98.13	26.24	98.77	38.52		
13.27	3.07	10.94	3.01	66.26	11.60	95.05	...	98.63	100.00	82.95	100.00	78.76	100.00	99.68	42.75		
3.26	0.27	9.19	3.93	25.29	0.27	99.57	...	99.74	100.00	100.00	100.00	100.00	100.00	99.69	55.86		
...	...	11.87	15.55	35.74	11.94	97.68	...	...	...	100.00	100.00	100.00	100.00	100.00	62.05
8.69	3.50	22.51	0.16	23.97	0.77	98.86	...	99.29	28.66	89.84	21.43	93.54	31.71	97.47	7.11		
2.59	16.40	7.70	0.71	7.75	...	97.76	...	99.42	16.30	99.04	74.50	99.85	...	99.80	49.20		
9.55	...	13.54	2.09	25.20	0.70	97.47	...	100.00	...	99.75	61.11	99.74	33.33	99.78	78.63		
4.47	1.23	12.57	3.90	20.83	3.82	97.64	...	99.35	33.54	98.03	88.34	97.66	69.33	99.35	47.13		

STATEMENT NO. F.—Showing side by side the ratios per mille of population

District.	1923-24.		1924-25.		1925-26.		1926-27.	
	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
1	2	3	4	5	6	7	8	9
Patna ...	0·06	39·12	0·13	41·63	0·49	45·73	1·69	60·52
Gaya ...	0·04	23·75	0·04	25·34	0·46	29·72	2·21	31·69
Shahabad ...	0·02	32·85	0·10	22·24	0·16	31·15	0·99	40·83
Saran ...	0·05	30·96	0·44	32·84	0·50	34·76	0·50	32·75
Champaran ...	0·09	23·23	0·38	23·19	0·65	26·24	0·98	29·89
Muzaffarpur ...	0·12	33·42	0·21	33·22	0·24	35·23	0·36	36·37
Darbhanga ...	0·05	32·14	0·15	31·11	0·12	34·67	0·27	35·85
Monghyr ...	0·09	34·89	0·12	30·21	0·11	35·18	0·62	37·92
Bhagalpur ...	0·48	32·18	0·46	32·57	0·13	36·64	0·65	38·90
Purnea ...	0·06	17·39	0·04	21·67	0·17	24·06	0·69	25·45
Santal Parganas ...	0·03	31·16	0·06	33·82	0·17	34·66	0·90	37·47
Cuttack ...	0·28	22·29	0·77	21·96	2·50	30·39	2·92	21·99
Balasore ...	0·37	30·79	0·34	25·88	1·71	36·12	2·34	43·48
Angul ...	...	33·73	...	33·78	...	109·19	0·06	95·66
Puri ...	0·25	38·33	1·21	38·75	7·21	64·43	3·54	48·92
Sambalpur ...	0·01	30·09	0·12	27·21	0·60	27·71	0·68	26·31
Hazaribagh ...	0·03	28·02	0·05	28·38	0·34	34·75	1·00	35·97
Ranchi ...	0·01	33·58	0·02	36·98	0·34	43·01	1·02	45·63
Palamau ...	0·04	22·45	0·01	26·92	·06	28·92	0·28	30·84
Manbhum ...	0·01	37·46	0·02	32·73	0·32	46·18	0·42	48·32
Singhbhum ...	0·14	21·14	0·36	29·64	0·52	33·75	0·16	29·44
Total ...	0·11	29·91	0·24	29·72	0·67	35·33	1·05	36·71

of deaths from small-pox and the ratios of successful vaccinations per mille of population during the ten years ending 1932-33.

1927-28.		1928-29.		1929-30.		1930-31.		1931-32.		1932-33.	
Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
10	11	12	13	14	15	16	17	18	19	20	21
1.07	45.78	0.49	33.32	0.40	28.34	0.23	25.86	0.30	26.19	0.68	41.13
1.21	25.92	0.30	27.20	0.27	30.24	0.56	30.79	0.29	25.96	1.15	41.84
1.60	31.64	0.37	24.90	0.16	23.68	0.32	23.65	0.53	25.31	1.20	29.36
0.75	36.49	0.19	36.99	0.19	41.23	0.17	33.68	0.34	32.43	1.29	39.63
0.34	23.24	0.07	23.84	0.10	24.51	0.06	20.98	0.12	20.44	0.85	27.41
0.56	37.26	0.18	35.52	0.25	36.18	0.06	34.63	0.06	31.32	0.37	37.23
0.34	39.22	0.16	36.36	0.12	37.63	0.18	35.54	0.17	32.47	0.44	37.89
0.93	36.65	0.53	38.29	0.45	35.86	0.42	30.35	0.16	28.85	0.57	32.96
1.13	40.63	0.45	38.32	0.16	35.17	0.08	34.53	0.07	34.15	0.41	37.20
0.95	25.03	0.65	23.77	0.18	22.20	0.08	21.38	0.05	19.67	0.24	24.55
1.06	36.28	0.46	34.28	0.20	31.32	0.36	34.28	0.25	30.05	0.27	33.04
0.95	26.65	0.18	20.00	0.09	23.20	0.50	19.61	0.44	27.64	1.14	21.24
1.42	28.22	0.43	36.65	0.09	44.98	0.29	40.12	0.13	40.02	0.40	44.92
0.08	90.45	0.03	61.65	...	49.20	...	46.76	...	39.75	0.009	36.35
0.47	48.59	0.08	39.80	0.02	44.86	0.06	45.27	0.26	44.41	1.87	47.29
0.27	25.21	0.22	26.66	0.17	24.82	0.76	29.37	1.40	30.28	1.31	23.60
0.73	38.77	0.30	38.74	0.15	35.92	0.13	36.81	0.10	33.96	0.07	34.05
0.39	43.34	0.24	40.73	0.08	40.80	0.04	55.24	0.05	35.04	0.46	49.73
1.01	30.57	1.35	30.66	0.95	30.67	0.43	33.58	0.23	37.35	0.31	23.96
0.17	45.66	0.06	38.51	0.05	35.79	0.13	38.93	0.05	30.53	0.02	32.57
0.13	28.59	0.12	27.58	0.11	29.46	0.27	35.62	0.14	25.28	...	22.71
0.79	35.10	0.31	32.72	0.19	32.81	0.24	32.05	0.23	29.72	0.64	34.26

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Provinces of Bihar and Orissa during the year 1932-33.

District.	Towns.	Number of births during the year ending 31st March 1933.	Number of deaths amongst infants under one year during the year ending 31st March 1933.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1933.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Patna	Patna	2,570	368	1,443	1st October 1884.
	Bihar	882	100	123	1st April 1887.
	Dinapur	894	155	520	28th January 1891.
	Barh	207	36	25	1st April 1887.
	Khagole	140	23	...	12th July 1910.
	Total	4,693	682	2,111	
Gaya	Gaya	2,624	1,045	2,323	1st January 1883.
	Tikari	272	33	72	3rd January 1891.
	Daudnagar	377	50	65	Ditto.
	Total	3,273	1,128	2,460	
Shahabad	Arrah	628	59	867	20th July 1885.
	Buxar	379	55	292	1st April 1887.
	Dumraon	268	19	61	Ditto.
	Jagadispur	380	21	213	20th December 1890.
	Sassaram	582	45	625	1st April 1887.
	Bhabhua	227	17	131	Ditto.
	Total	2,464	216	2,189	
	Total of Patna Division.	10,430	2,026	6,760	
Saran	Chapra	1,055	233	939	1st April 1887.
	Revelganj	420	83	427	12th December 1890.
	Siwan	770	90	261	1st April 1887.
	Total	2,245	406	1,627	
Champaran	Motihari	328	53	134	1st April 1887.
	Bettiah	530	29	255	Ditto.
	Total	858	82	389	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1932-33—contd.

District.	Towns.	Number of births during the year ending 31st March 1933.	Number of deaths amongst infants under one year during the year ending 31st March 1933.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1933.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Muzaffarpur	Muzaffarpur	1,269	193	248	1st January 1886.
	Sitamarhi	353	70	110	1st April 1887.
	Hajipur	704	121	92	1st May 1890.
	Lalganj	312	55	40	1st April 1887.
	Total	2,638	439	490	
Darbhanga	Darbhanga	2,070	242	512	24th May 1884.
	Roserah	295	28	74	3rd January 1891.
	Samastipur	218	22	59	25th July 1910.
	Madhubani	506	53	213	1st April 1887.
	Total	3,089	345	863	
	Total of Tirhut Division.	8,830	1,272	3,369	
Monghyr	Monghyr	1,496	177	408	15th November 1882.
	Jamalpur	1,036	98	155	Ditto.
	Total	2,532	275	563	
Bhagalpur	Bhagalpur	1,512	190	586	15th February 1884, withdrawn on 16th October 1895 ; re-extended on 18th August 1898.
	Colgong	168	21	51	Ditto, re-extended on 19th December 1901.
	Total	1,680	211	637	
Purnea	Purnea	221	28	107	1st July 1887.
	Kishanganj	117	13	55	12th November 1892.
	Katihar	132	6	41	8th August 1910.
	Forbesganj	151	29	7	9th August 1912.
	Total	621	76	210	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1932-33—contd.

District.	Towns.	Number of births during the year ending 31st March 1933.	Number of deaths amongst infants under one year during the year ending 31st March 1933.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1933.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Santal Parganas ...	Sahibganj ...	104	5	77	1st May 1884.
	Deoghar ...	267	15	132	Ditto.
	Madhupur ...	70	6	75	22nd August 1910.
	Dumka ...	76	12	189	Notifications, dated the 9th April 1884, and 23rd August 1910.
	Total ...	517	38	473	
Cuttack ...	Total of Bhagalpur Division.	5,350	600	1,883	
	Cuttack ...	1,025	79	464	1st September 1884.
	Kendrapara ...	362	85	81	7th February 1888.
	Jajpur ...	281	34	71	Ditto.
	Total ...	1,668	198	616	
Balasore ...	Balasore ...	404	90	142	7th February 1888.
Puri ...	Puri ...	762	248	115	Ditto.
Sambalpur ...	Sambalpur ...	488	78	95	7th March 1895.
Hazaribagh ...	Total of Division. Orissa	3,322	614	968	
	Hazaribagh ...	384	35	266	1st January 1885.
	Chatra ...	278	13	125	1st August 1885.
	Giridih ...	250	19	209	8th September 1910.
	Total ...	912	67	600	
Ranchi ...	Ranchi ...	589	55	1,879	1st April 1887.
	Lohardaga ...	526	18	183	25th June 1882.
	Total ...	1,115	73	2,062	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1932-33—concl'd.

District.	Towns.	Number of births during the year ending 31st March 1933.	Number of deaths amongst infants under one year during the year ending 31st March 1933.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1933.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Palamau	Daltonganj	257	20	88	9th October 1890.
Manbhum	Purulia	500	56	334	1st January 1887.
	Raghunathpur	160	17	56	9th February 1894.
	Jhalda	186	27	140	9th July 1892.
	Dhanbad	280	27	16	5th December 1918.
	Total	1,126	127	546	
Singhbhum	Chaibassa	349	46	290	20th June 1892.
	Chakradharpur	164	23	114	13th January 1919.
	Jugsalai	250	16	163	1st April 1924.
	Total	763	85	567	
	Total of Chota Nagpur Division.	4,173	372	3,863	
	Total for the Province	32,105	4,884	16,843	

ANNEXURE

Provincial Statement showing the different kinds of lymph

District.		Primary vaccination.											
		Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm	
		Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.
1		2	3	4	5	6	7	8	9	10	11	12	13
Patna	61,896	60,732	692	472	98.12	...	...
Gaya	81,131	80,502	180	449	99.22	...	...
Shahabad	49,673	49,621	20	32	99.89	...	...
Saran	83,260	82,832	289	139	99.49	...	...
Champaran	51,886	50,925	307	654	98.15	...	...
Muzaffarpur	98,302	97,837	385	80	99.53	...	...
Darbhanga	105,284	105,193	87	4	99.91	...	...
Monghyr	68,410	68,393	16	1	98.51	...	...
Bhagalpur	67,630	67,499	93	38	99.80	...	...
Purnea	51,742	50,821	491	430	98.22	...	...
Santal Parganas	55,296	54,878	149	269	99.72	...	...
Cuttack	43,142	42,896	103	143	99.42	...	...
Balasore	27,749	27,369	18	362	98.63	...	...
Angul	7,889	7,825	30	34	99.19	...	...
Puri	45,841	45,109	126	606	98.40	...	...
Sambalpur	18,105	18,047	23	35	99.68	...	...
Hazaribagh	47,994	47,814	149	31	99.62	...	...
Ranchi	44,004	44,004	...	...	100.00	...	...
Palamanu	19,458	18,966	95	397	97.49	...	...
Manbhum	52,911	52,299	341	271	98.84	...	...
Singhbhum	20,832	20,786	22	24	99.78	...	...
Total	1,102,435	1,094,848	3,616	4,471	99.27	...	...

II.

used and their rates of success during the year 1932-33.

			Re-vaccination.														
vaccination.			Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm vaccination.				
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
...	35,120	15,212	10,974	8,934	43.31	...	...	...	...	...
...	36,374	19,428	5,927	11,019	53.41	...	...	...	...	...
...	15,140	8,915	5,325	900	58.88	...	...	...	...	...
...	24,815	15,720	7,365	1,730	63.35	...	...	...	...	...
...	35,589	7,897	9,412	18,280	22.19	...	...	...	...	...
...	36,046	11,662	14,285	10,099	32.35	...	...	...	...	...
...	34,330	14,784	13,597	5,949	43.06	...	...	...	...	...
...	24,500	7,005	9,999	7,496	28.59	...	...	...	...	...
...	30,732	15,780	10,364	4,588	51.34	...	...	...	...	...
...	10,886	2,873	3,803	4,210	26.39	...	...	...	...	...
...	12,432	4,565	3,627	4,240	55.72	...	...	...	...	...
...	14,965	3,355	3,990	7,620	22.41	...	...	...	...	...
...	29,769	17,135	5,272	7,362	57.55	...	...	...	...	...
...	692	271	40	381	39.16	...	...	...	...	...
...	10,140	3,841	2,727	3,572	37.88	...	...	...	...	...
...	6,410	2,740	796	2,874	42.75	...	...	...	...	...
...	8,793	3,858	3,049	1,886	43.87	...	...	...	...	...
...	55,075	33,936	13,045	8,094	61.62	...	...	...	...	...
...	9,148	651	644	7,853	7.03	...	...	...	...	...
...	14,383	6,568	5,459	2,356	45.66	...	...	...	...	...
...	862	333	485	44	38.63	...	...	...	...	...
...	446,201	196,529	130,185	119,487	44.04	...	...	...	...	...

APPENDIX IV.

A summary of the activities of the Public Health Department (Engineering Branch) relating to the Sanitary improvements of the urban and rural areas in Bihar and Orissa during the year 1932-33.

Arrah municipality.—Apart from the maintenance of the water-supply there was but little development. There is no improvement yet in the standard of purity of the water supplied.

As funds are not likely to be available in the near future for the improvement to and flushing of the drains in the town the scheme did not make any progress.

Bhagalpur municipality.—The waterworks improvement scheme was sanctioned by Government for Rs. 5,10,974 and a grant of Rs. 1,50,000 was provided in the budget for 1933-34. The pumps will be driven by electricity.

The condition of standposts and filters was not good and a proposal was under consideration to provide a battery of rapid filters capable of supplying one million gallons a day.

Daltonganj municipality.—The waterworks improvement scheme estimated to cost Rs. 1,05,500 was nearing completion. The filter house, filter service reservoir and rearrangement of the distribution system had already been completed.

Gaya municipality.—Of the gravel wells provided in the waterworks improvement scheme the first one was successfully completed and on test gave a yield of 25,000 gallons an hour. It was handed over to the Joint Water Board in September 1932. A boring for the second gravel well was put down and a site selected for the third well.

Overhauling of the second engine and one of the boilers was also completed. The Peterson Chloronome worked well during the year and the quality of water supplied was satisfactory.

Jharia municipality and water board.—Construction of an outfall for the bazar drainage was commenced.

As regards water-supply, two additional filters at Topchanchi were completed for the water board's system and they now supply water of a high standard of bacteriological purity.

There is at present a leakage loss of 400,000 gallons a day from a daily flow from the headworks of about 1,700,000 gallons. When the repairs of the Tilataur and Jharia reservoirs have been completed it is hoped to reduce this loss to a reasonable proportion.

Monghyr municipality.—Steps taken to improve the pumping conditions of the unfiltered water plant have resulted in a considerable improvement in the quantity and pressure of the supply. The filtered water pumping plant as well as the settling tanks, filters and reservoirs were all maintained satisfactorily.

Muzaffarpur municipality.—The possibilities of effecting improvements to the existing surface drains of the town and of providing hydrants for road watering were under consideration.

Expenditure on the reorganization of the waterworks during the year and up to the end of the year amounted to Rs. 75,278 and Rs. 87,677 respectively.

The water from the tube-well at Kachisarai was on bacteriological examination found quite satisfactory.

Patna.—The rearrangement of the distribution system in the Kadam Kuan area, costing Rs. 28,488 was well in hand.

Work on the construction of tube-wells for the City water-supply extension scheme was started shortly after the close of the year. The scheme is estimated to cost Rs. 7,36,728.

Patna-Bankipur waterworks was again maintained in a state of efficiency and satisfactory supply of water of a high standard of purity was given throughout the year. The result of the year's work showed a net profit of Rs. 13,043.

Lining of the Bakarganj nala started in April 1932 at an estimated cost of Rs. 49,878 was practically completed except for a short length near the outfall into the Ganges. The work has effected a considerable improvement in the sanitary condition of the nala.

Puri municipality.—The test pumping, which was stopped on 19th July 1932, has proved the reliability of the source of the water-supply consisting of six 9" diameter tube-wells.

The expenditure on the water-supply scheme during the year was 84,545. Orders of Government having been received to take in hand the construction of the rising main, service reservoir and distribution system steps were being taken to proceed with these works.

Sonepur.—An additional 5" tube-well with pumping plant was provided for the improvement of water-supply during the period of the annual fair in November. The supply made during the year's fair was adequate except in Bailhatta where a few additional standposts are still necessary.

Water-supply to melas.—Arrangements were made for the supply of water with the help of the departmental pumping plant for the Snan and Rathjatra festivals at Puri and for the melas at Phulwari, Bargaon, Angari and Bihta.

No. 8873-L.S.-G.

GOVERNMENT OF BIHAR AND ORISSA.

(MINISTRY OF LOCAL SELF-GOVERNMENT.)

R E S O L U T I O N .

The 27th October 1933.

READ—

The Public Health Report for the year 1932 and the Vaccination Report for the year 1932-33.

1. *Vital statistics.*—The total number of births and deaths recorded in the province during the year was 1,272,296 and 775,945 respectively against 1,276,010 and 1,002,699, respectively in the previous year. The birth rate per mille of population for the year under review works out to 33·8 as compared with 33·9 in 1931. The death-rate however showed marked decrease, the figures for 1932 being 20·6 as against 26·6 in 1931. The result was that the rate of increase in the population was 13·2 as compared with 7·3 in the previous year. The low death-rate has been ascribed by the Director of Public Health mainly to the absence of severe epidemics during the year.

Government are aware of the inadequacy of the present method of collection of vital statistics about which reference has been made by the Director of Public Health in his report, but very little improvement is possible in the rural areas in the present state of education of the people. A beginning has however been made to improve matters in the urban areas. The result of the experiment of transferring the duty of registration of births and deaths from the police to the municipal authorities having been found satisfactory at Patna and Ranchi, the experiment has been extended to four other municipalities and if success be attained, it will be extended further.

2. *Infant mortality.*—During the past few years Government viewed with concern the increase in the rate of infant mortality which gradually rose from 133·1 per thousand in 1928 to 143·6 in 1931 and they note with some satisfaction that last year there was a drop to 128·8 per thousand on the basis of actual births recorded. Permanent improvement cannot, however, be expected until maternity work is taken up by the local bodies in right earnest. Government would again appeal to the municipalities to make a beginning by appointing at least one trained midwife in each town. They are aware that financial difficulties stand in the way of the municipal commissioners, but sooner this problem is tackled the better. At the same time Government take this opportunity of acknowledging with pleasure the response made to their appeal by the municipal authorities of some of the larger towns and by the Jharia Mines Board of Health.

Cholera.—The provincial death-rate from cholera fell from 1·1 in the previous year to 0·2 in 1932, the mortality from this disease showing a decrease of 31,595. This was the principal factor in the low death-rate recorded for 1932. As usual the Orissa districts suffered most. Thanks, however, to the energetic steps taken by the chairman of the Balasore district board at the beginning of the outbreak of the epidemic after the Chandesar fair, it could not assume the proportion it would otherwise have done. Government also record their appreciation of the sanitary measures taken at the Rathajatra festival by the Health Officer of Puri which prevented an outbreak of cholera that usually follows this festival at Puri. Eleven of the more important districts worked public health organization scheme and thus trained staff were available in them to efficiently control an epidemic at its outset. Cholera vaccine continued to be supplied free by Government and though the number

of inoculations decreased last year as compared with the figures of the previous three years, it was due not to any disinclination on the part of the people to get themselves inoculated when an epidemic broke out but to lesser incidence of cholera. On the other hand the Director of Public Health reports that there were signs of people coming forward themselves to get them protected with inoculation when threatened with an epidemic. Government note with pleasure this growing change in the attitude of the people towards this preventive measure.

Bacteriophage.—Government view with satisfaction that bacteriophage was administered this year also with marked success in the two districts of North Bihar, viz., Muzaffarpur and Purnea, and that the experiments of the year repeat and re-affirm the good results obtained previously with regard to the value of cholera bacteriophage as a preventive and curative of cholera. The results obtained so far tend to prove that besides being cheap and easy of administration, bacteriophage is better for the prevention and treatment of cholera than the usual methods. Its use has accordingly been extended to two more districts in the province in addition to Muzaffarpur and Purnea.

Small-pox.—It had been apprehended that there would be another three years of severe small-pox epidemic beginning for 1932 and unfortunately the apprehension was to some extent realised during the year under review. The number of deaths from this fell though preventable disease rose by 8,438, the death-rate (.04) being double of that of the previous year. The Western countries have succeeded in practically stamping out small-pox, people willingly subjecting themselves to vaccination and revaccination. Here again what stands in the way of using the same preventive method in this country to the fullest extent is the prejudice of the people which one can only hope will die with the spread of education. The Director of Public Health deplures that revaccination can be done only by following a policy of persuasion and he would desire that both primary vaccination and revaccination should be made compulsory throughout the province. However one may wish to introduce compulsory revaccination it is impossible in the present state of the country. For sometime past compulsory primary vaccination is in force in the Urban areas of the province and a beginning has been made to enforce it in the rural areas. In the last year's resolution Government noticed what had been done by the Patna and Muzaffarpur district boards in this respect. These boards had proved that the control over vaccination did not involve the local bodies in any additional expenditure. During the year under review five other boards, viz., of Champaran, Purnea, Bhagalpur, Darbhanga and Gaya, shouldered the responsibility for vaccination quite willingly and for this thanks of Government are due to them. Primary vaccination was made compulsory and provisions of sections 92 to 96 of the Local Self-Government Act were extended to these districts also whereby the control was transferred to the boards. The staff of the district board health organization in all these districts except Bhagalpur and Darbhanga have taken up the duties of inspection of vaccination and Government vaccination inspecting staff have been withdrawn, thus effecting a saving as recommended by the Retrenchment Committee. It is hoped that other districts which have health organization scheme going will follow their example and take over the control and management of vaccination.

Prevention of blindness.—A small beginning was made in the propaganda work in connection with the prevention of blindness.

School medical inspection.—The medical inspection of school children continued. The total number of children examined during the year was 10,801 including the children examined by the Lady School Medical Officer. Of these more than half (6,800) were found to be suffering from some kind of physical defect. Bulk of these defects were minor ones ; but major defects, such as defective visions, heart affections, etc., were also noticed. A few cases of early tuberculosis and leprosy too came to light. The parents or guardians of the children were informed of the defects. The question of increasing the efficiency of the work done, particularly in the direction of ensuring that the defects pointed out at the medical inspections were followed up and treated,

were under examination. Government in consultation with the Director of Public Health have devised some steps and the latter has undertaken to start them as an experiment. The result of the experiment is expected to be known to Government during the next year.

Public Health Department (Engineering Branch).—A summary of the activities of this department relating to the sanitary improvements in areas under the jurisdiction of local bodies during the year is appended in the report.

The office of the Director of Public Health was held by Lieutenant-Colonel J. A. S. Phillips, I.M.S., throughout the year. Thanks of Government are due to him and his staff for the efficient manner in which they discharged their duties and also for the cordial relations that were maintained between the department and local bodies. Government have noted the names of the subordinate officers commended in the report. Government also desire to thank Major Mitra for an interesting report.

By order of the Government of Bihar and Orissa
(Ministry of Local Self-Government),

M. N. SEN,
Offg. Secretary.

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